



**CITY OF CAMBRIDGE
MASSACHUSETTS
BOARD OF ZONING APPEAL
831 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02139
617 349-6100**

BZA APPLICATION FORM

Plan No: BZA-011933-2016

GENERAL INFORMATION

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit : v Variance : Appeal :

PETITIONER : New Cingular Wireless PCS LLC d/b/a AT&T Mobility- C/O Timothy Greene

PETITIONER'S ADDRESS : 1527 Riverside Drive Norwell, MA 02061

LOCATION OF PROPERTY : 141 Portland Street

TYPE OF OCCUPANCY : IB ZONING DISTRICT : Industry B Zone

REASON FOR PETITION :

Other: Telecommunications Upgrade


DESCRIPTION OF PETITIONER'S PROPOSAL :

This application is a Eligible Facilities Request pursuant to Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, 47 U.S.C. 1455; or in the alternative, for a special permit under the zoning ordinance as cited above, if and to the extent necessary, all rights reserved.

AT&T will be replacing 3 antennas currently on site AT&T will also be adding and upgrading other telecommunications equipment as part of nationwide network upgrades

SECTIONS OF ZONING ORDINANCE CITED :

- Article 4.000 Section 4.32.G.1 (Telecommunications Facility).
- Article 4.000 Section 4.40 (Footnote 49) (Telecommunications Facility).
- Article 10.000 Section 10.40 (Special Permit).
- Article 6409 Section (Middle Class Tax Relief and Job Creation Act).

Original Signature(s) : 
(Petitioner(s) / Owner)

Timothy Greene
(Print Name)

Address : 157 Riverside Drive
Norwell, MA 02061

Tel. No. : 617-877-2450

E-Mail Address : tgroene@terraresearchllc.com

Date : 11/10/16

BZA APPLICATION FORM - OWNERSHIP INFORMATION

To be completed by OWNER, signed before a notary and returned to The Secretary of the Board of Zoning Appeals.

I/We Kendall Square Entity Inc.
(OWNER)

Address: 1270 Soldiers Field Road

State that I/We own the property located at 141 Portland St,
which is the subject of this zoning application.

The record title of this property is in the name of Kendall
Square Entity Inc.

*Pursuant to a deed of duly recorded in the date 12/31/85, Middlesex South
County Registry of Deeds at Book 16682, Page 565; or
Middlesex Registry District of Land Court, Certificate No. _____
Book _____ Page _____

[Signature] AS AGENT
SIGNATURE BY LAND OWNER OR
AUTHORIZED TRUSTEE, OFFICER OR AGENT*

*Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of Suffolk

The above-name Paul Charas personally appeared before me,
this 3rd of November, 2015, and made oath that the above statement is true.

My commission expires 11/11/19 (Notary Seal).



- If ownership is not shown in recorded deed, e.g. if by court deed, or inheritance, please include documentation.

BZA APPLICATION FORM

DIMENSIONAL INFORMATION

APPLICANT: TerraSearch **PRESENT USE/OCCUPANCY:** Commercial/Telecom
LOCATION: 141 Portland St Cambridge, MA 02139 **ZONE:** Industry B Zone
PHONE: _____ **REQUESTED USE/OCCUPANCY:** Same

	<u>EXISTING CONDITIONS</u>	<u>REQUESTED CONDITIONS</u>	<u>ORDINANCE REQUIREMENTS</u> ¹	
<u>TOTAL GROSS FLOOR AREA:</u>	<u>0</u>	<u>0</u>	<u>0</u>	(max.)
<u>LOT AREA:</u>	<u>0</u>	<u>0</u>	<u>0</u>	(min.)
<u>RATIO OF GROSS FLOOR AREA TO LOT AREA: 2</u>	<u>0</u>	<u>0</u>	<u>0</u>	(max.)
<u>LOT AREA FOR EACH DWELLING UNIT:</u>	<u>0</u>	<u>0</u>	<u>0</u>	(min.)
<u>SIZE OF LOT:</u>				
WIDTH	<u>0</u>	<u>0</u>	<u>0</u>	(min.)
DEPTH	<u>0</u>	<u>0</u>	<u>0</u>	
<u>SETBACKS IN FEET:</u>				
FRONT	<u>0</u>	<u>0</u>	<u>0</u>	(min.)
REAR	<u>0</u>	<u>0</u>	<u>0</u>	(min.)
LEFT SIDE	<u>0</u>	<u>0</u>	<u>0</u>	(min.)
RIGHT SIDE	<u>0</u>	<u>0</u>	<u>0</u>	(min.)
<u>SIZE OF BLDG.:</u>				
HEIGHT	<u>0</u>	<u>0</u>	<u>0</u>	(max.)
LENGTH	<u>0</u>	<u>0</u>	<u>0</u>	
WIDTH	<u>0</u>	<u>0</u>	<u>0</u>	
<u>RATIO OF USABLE OPEN SPACE TO LOT AREA:</u>	<u>0</u>	<u>0</u>	<u>0</u>	(min.)
<u>NO. OF DWELLING UNITS:</u>	<u>0</u>	<u>0</u>	<u>0</u>	(max.)
<u>NO. OF PARKING SPACES:</u>	<u>0</u>	<u>0</u>	<u>0</u>	(min./max)
<u>NO. OF LOADING AREAS:</u>	<u>0</u>	<u>0</u>	<u>0</u>	(min.)
<u>DISTANCE TO NEAREST BLDG. ON SAME LOT:</u>	<u>0</u>	<u>0</u>	<u>0</u>	(min.)

Describe where applicable, other occupancies on same lot, the size of adjacent buildings on same lot, and type of construction proposed, e.g.; wood frame, concrete, brick, steel, etc.

1. SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS).
2. TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.
3. OPEN SPACE SHALL NOT INCLUDE PARKING AREAS, WALKWAYS OR DRIVEWAYS AND SHALL HAVE A MINIMUM DIMENSION OF 15'.



CITY OF CAMBRIDGE
 MASSACHUSETTS
 BOARD OF ZONING APPEAL
 831 MASSACHUSETTS AVENUE
 CAMBRIDGE, MA 02139
 617 349-6100

2016 NOV 14 PM 2:39

BZA APPLICATION FORM

Plan No:

OFFICE OF THE CITY CLERK
 CAMBRIDGE, MASSACHUSETTS
 BZA-011933-2016

GENERAL INFORMATION

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit : v Variance : Appeal :

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AT&T will be replacing 3 antennas currently on site AT&T will also be adding and upgrading other telecommunications equipment as part of nationwide network upgrades

SECTIONS OF ZONING ORDINANCE CITED :

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Article <u>4.000</u>	Section <u>4.40 (Footnote 49) (Telecommunications Facility).</u>
Article <u>10.000</u>	Section <u>10.40 (Special Permit).</u>
Article <u>6409</u>	Section <u>(Middle Class Tax Relief and Job Creation Act).</u>

Original Signature(s): *Timothy W. Greene*
 (Petitioner(s) / Owner)

Timothy W. Greene
 (Print Name)

Address : 157 Riverside Drive
Norwell, MA 02061

Tel. No. : 617-877-2950

E-Mail Address : tgreene@terrasearchllc.com

Date : 11/10/16

141 Portland St.



141 Portland St.

Petitioner

43A-24
CHARLES STARK DRAPER LABORATORY, INC.
ATTN: ELIZABETH MORA - MS #05
555 TECHNOLOGY SQUARE
CAMBRIDGE, MA 02139

42-13
CAMBRIDGE ELECTRIC LIGHT CO.
NSTAR ELECTRIC CO.
P.O. BOX 270
HARTFORD, CT 06141

NEW CINGULAR WIRELESS PCS LLC
D/B/A AT&T MOBILITY
C/O TIMOTHY GREENE
157 RIVERSIDE DRIVE
NORWELL, MA 02061

42-57
CANAVAN, TERRY L.
C/O JAS HOMEOWNERSHIP LLC
ATTN: JUST A START CORPORATION
1035 CAMBRIDGE ST. #12
CAMBRIDGE, MA 02141

42-57
VOGEL, FRANK E.
125 PORTLAND ST., #2
CAMBRIDGE, MA 02139

42-57
BASTOS, GERADO
125 PORTLAND ST.
CAMBRIDGE, MA 02139

42-57
MONTROYA, AMANDA MARLENE
125 PORTLAND ST., #4
CAMBRIDGE, MA 02139

42-57
SCHECHTERMAN, DEBORAH
125 PORTLAND ST., #5
CAMBRIDGE, MA 02139

42-57
BARUA, PRAJOY & MAHUYA MUTSUDDI
125 PORTLAND ST., #6
CAMBRIDGE, MA 02139

42-57
LEE, HAN KYU
125 PORTLAND ST., #7
CAMBRIDGE, MA 02140

42-57
KOCHANOWSKI, EDWARD J. &
MARGERY WILSON
125 PORTLAND ST
CAMBRIDGE, MA 02139

42-58
MARTINS, ALFRED & ALICE MARTINS,
TRS. OF THE MARTINS HARVARD REALTY TRUST
166 HIGHLAND AVE
SOMERVILLE, MA 02143

42-68
MARTINS, ALFRED & ALICE MARTINS TRS. OF THE
MARTINS HARVARD REALTY TRUST
& CITY OF CAMBRIDGE TAX TITLE
166 HIGHLAND AVE.
SOMERVILLE, MA 02143

42-70
U.S.T. FINANCIAL PLANNING CO., INC.
C/O INTERCONTINENTAL MANAGEMENT CORP.
1270 SOLDIERS FIELD ROAD
BRIGHTON, MA 02135

42-87
BROADWAY/HAMPSHIRE ASSOCIATES
LIMITED PARTNERSHIP
ONE APPLETON ST.
BOSTON, MA 02116

42-88
KAY, SUPA
125 HARVARD ST, #101
CAMBRIDGE, MA 02139

42-88
DIETRICH, KERRY
125 HARVARD ST., #408
CAMBRIDGE, MA 02139

42-88
RAYMOND, SCOTT B. & EMILY S. RAYMOND
125 HARVARD ST. UNIT#407
CAMBRIDGE, MA 02139

42-88
GREEN, JANICE B.
125 HARVARD ST. UNIT#406
CAMBRIDGE, MA 02139

42-88
BISHOP, MICHAEL BLAKE
125 HARVARD ST., #405
CAMBRIDGE, MA 02139

42-88
DENG, CHAO LI & GUAN YU CHEN
125 HARVARD ST., #404
CAMBRIDGE, MA 02139

42-88
JAS HOMEOWNERSHIP LLC
C/O BRITT, ERIN M.
125 HARVARD ST., #403
CAMBRIDGE, MA 02139

42-88
HENRIQUEZ, REYNA E.
678 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

42-88
LAVINE, REBECCA
125 HARVARD ST., #401
CAMBRIDGE, MA 02139

42-88
LIU, HAoyang & SIAN V. LIU
125 HARVARD ST. UNIT#307
CAMBRIDGE, MA 02139

42-88
WORON, STEPHANIE
125 HARVARD ST. UNIT#306
CAMBRIDGE, MA 02139

42-88
ZAMORA, ELEONORE
C/O CASCAP REALTY INC
231 SOMERVILLE AVE
SOMERVILLE, MA 02143

42-88
CRUZ, MARGARITA
125 HARVARD ST., #304
CAMBRIDGE, MA 02139

42-88
BARAGLIA, CARLO & MICHELLE M. DUVAL
C/O JAS HOMEOWNERSHIP LLC
1035 CAMBRIDGE ST., #12
CAMBRIDGE, MA 02141

42-88
KAFLE, RUKMANI & RAMJI BASNET
125 HARVARD ST., #302
CAMBRIDGE, MA 02139

141 Portland St .

42-88
BERNARD, ROSE M.
125 HARVARD ST. UNIT#301
CAMBRIDGE, MA 02139

42-88
MARTINEZ, LIGIA E.
125 HARVARD ST., #208
CAMBRIDGE, MA 02141

42-88
ALI, AMINAT H.
125 HARVARD ST. UNIT#207
CAMBRIDGE, MA 02139

42-88
JAS HOMEOWNERSHIP LLC
1035 CAMBRIDGE ST., #12
CAMBRIDGE, MA 02141

42-88
TRAHANT, REMY
125 HARVARD ST. UNIT#205
CAMBRIDGE, MA 02139

42-88
MOUAYDIA, NAJIB & KHADIJA MOUBHIJ
125 HARVARD ST., #204
CAMBRIDGE, MA 02139

42-88
NAVARATNA, DEEPTI
125 HARVARD ST., #203
CAMBRIDGE, MA 02139

42-88
YENESEW, ENDESHAW W. &
HASABE A. MEKONEN
125 HARVARD ST. UNIT#202
CAMBRIDGE, MA 02139

42-88
JAHAN, NASIM
125 HARVARD ST., #201
CAMBRIDGE, MA 02139

42-33
200 BROADWAY, LLC,
ATTN: CHRISTOPHER CASSEL
200 BROADWAY
CAMBRIDGE, MA 02139



November 9, 2016

Donna P. Lopez, City Clerk City of Cambridge City Hall 795 Massachusetts Avenue Cambridge, MA 02139	Constantine Alexander, Chair Board of Zoning Appeal City Hall 795 Massachusetts Avenue Cambridge, MA 02139
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Applicant: New Cingular Wireless PCS, LLC (“AT&T”)
Property Address: 141 Portland Street a/k/a 198 Broadway
Assessor’s Map 42, Lot 70 (the “Property”)
Re: Application for:
(i) Eligible Facilities Request pursuant to Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, 47 U.S.C. § 1455; or, in the alternative,
(ii) Special Permit under Cambridge Zoning Ordinance Section 4.32(g)(1) and M.G.L. c. 40A, Section 9; and
(iii) Any other zoning relief required.
(All relief if and to the extent necessary, all rights reserved)

Dear Ms. Lopez, Mr. Alexander and Members of the Board of Zoning Appeal:

Pursuant to Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012 (a/k/a the “Spectrum Act” or “Section 6409”), 47 U.S.C. § 1455, as further implemented by the Federal Communications Commission’s Report and Order *In re Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies*, FCC Docket No. 13-238, Report and Order No. 14-153 (October 17, 2014) (the “FCC Order”), New Cingular Wireless PCS, LLC (“AT&T”) hereby submits this Eligible Facilities Request (“Request”); and, in the alternative, applies for a special permit from the City of Cambridge Board of Zoning Appeal (the “Board”) under Section 432(g)(1) of the Cambridge Zoning Ordinance (the “Ordinance”) to modify its existing “Telephone Exchange including Transmission Facilities to serve a Mobile Communication System” (the “Facility”) on the rooftop of 141 Portland Street a/k/a 198 Broadway (the “Special Permit Application”).²

² AT&T submits this Request, Special Permit application and supporting materials subject to a full and complete reservation of AT&T’s rights under the Spectrum Act and the FCC Order including without limitation its rights with respect to (i) any submittal requirements or approval criteria that are inconsistent with the prohibitions established by the FCC Order, (ii) any delay beyond the deadlines established in the FCC Order, (iii) the imposition of conditions on any approval that are inconsistent with the FCC Order, and (iv) referral or requirement to a discretionary review process such as a special permit.

Under Section 6409, AT&T's proposed modification of its existing transmission equipment on the existing building, previously approved by the Board for use as a wireless communication base station, does "not substantially change the physical dimensions" of the existing building. Therefore, AT&T's Request must be approved administratively, including the issuance of a building permit, to enable AT&T to make the proposed modifications to its transmission equipment.

In the alternative, as demonstrated in this application letter, the AT&T's proposed modifications to its existing Facility on the Property located in the IB zoning district satisfy the requirements for the grant of a special permit pursuant to Section 10.43 of the Ordinance.

I. APPLICATION PACKAGE

Enclosed with this application is a check payable to the City of Cambridge in the amount of \$500.00. In addition to the signed original of this letter are copies of the letter and the following materials:

1. The following completed and signed application forms:
 - a. BZA Application Form – General Information;
 - b. BZA Application Form – Ownership Information;
 - c. BZA Application Form – Dimensional Requirements;
 - d. BZA Application Form – Supporting Statement for a Special Permit; and
 - e. BZA Application Form – Check List;
2. AT&T's relevant FCC License information;
3. Drawings by Hudson Design Group consisting of 8 pages dated 10/6/16;
4. Manufacturer's specification sheets for AT&T's proposed antennas and other featured equipment;
5. Photographs of the existing building and photosimulations of the proposed modifications Facility by Hudson Design Group., dated 6/30/15;
6. Radio Frequency Coverage Report, demonstrating the public need for the proposed modifications to the Facility, radio frequency coverage maps showing (a) existing or predicted coverage from neighboring facilities; and (b) coverage with the proposed Facility;
7. Structural Analysis by Hudson Design Group LLC dated July 29, 2016;
8. Maximum Permissible Exposure Study, Theoretical Report, by SAI Communications, dated November 30, 2015;
9. Letter of Authorization from Owner of Subject Property; and

10. Deed to subject property.

In addition to the supporting materials identified above, submitted simultaneously herewith is a completed building permit application package including:

1. Completed Building Permit Application;
2. Certificate of Liability Insurance;
3. Worker's Compensation Insurance Affidavit;
4. Construction Supervisor License for Keith F Barnard; and
5. 1 copy of the Plans.

II. PROPOSED FACILITY DESIGN

AT&T seeks to modify the existing Facility on the roof of the building located at the Property. The existing Facility consists of nine (9) panel antennas (Alpha Sector: 3 antennas, Beta Sector: 3 antennas, and Gamma Sector: 3 antennas) that mounted in three (3) locations. The proposed modifications include the replacement and relocation of one (1) antenna per sector. The replacement antennas will be façade mounted to the exterior of the building using mounts consistent with the current Facility's design. Consistent with the concealment elements of the existing Facility's design, the proposed replacement antennas will be painted to match the color and texture of the existing brick facade. Six (6) remote radio-head units (RRUs) will be added and three (3) RRU's will be removed.

The Facility's design is shown in detail in the Zoning Drawings attached as Exhibit 3 to this application letter and featured equipment is described in the manufacturers' specification sheets attached as Exhibit 4. The photographs and photosimulations (Exhibit 5) show the building rooftop and façade surfaces as currently existing from various locations in the neighborhood around the Property and as simulated with proposed modifications to the existing Facility. A structural analysis for the Facility demonstrates that the building is capable of supporting AT&T's proposed equipment at or near the locations shown on the Zoning Drawings (*see* Exhibit 7).

The Facility will continue to bring advanced wireless voice, text and data communications services to the surrounding areas. It will allow residents, professionals, government, businesses and students to communicate locally, nationally and internationally from virtually any location within the coverage area. In the event of an emergency, the improved Facility will allow immediate contact with fire, rescue and other emergency personnel. The improved Facility will thus enhance public health, safety and welfare both in ordinary daily living and in the event of fire, accident, medical emergency, natural disaster or other dangers.

III. BACKGROUND

AT&T is licensed by the Federal Communications Commission to construct and operate a wireless telecommunications network in various markets throughout the country, including the

Commonwealth of Massachusetts and the City of Cambridge. A copy of the AT&T's FCC license that covers the area of the proposed Facility is included with this application (*see* Exhibit 2). AT&T is in the process of designing and constructing additional wireless facilities to its existing telecommunications system to serve Massachusetts. One of the key design objectives of its systems is to provide adequate and reliable coverage. Such a system requires a grid of radio transmitting and receiving links located approximately .5 to 2 miles apart, depending on the location of existing and proposed installations in the surrounding area, the extent of use of AT&T's wireless services within the network, and the existing topography and obstructions. The radio transmitting and receiving facilities operate on a line-of-sight basis, requiring a clear path from the facility to the user on the ground. In urban settings, this dynamic requires the antennas to be located on buildings at heights and in locations where the signal is not obstructed or degraded by other buildings or by topographical features such as hills.

IV. RF COVERAGE DETERMINATION

AT&T has performed a study of radio frequency coverage for the City of Cambridge and from the Property, the results of which are described in the Radio Frequency Report submitted with this application (*see* Exhibit 6). Without the proposed modifications to its existing Facility, AT&T has a substantial coverage gap in this area of Cambridge stretching from both sides of Cambridge Street. AT&T has determined that the proposed modifications to the existing Facility located on the building at the Property will provide needed coverage to the targeted sections of the City and the immediately surrounding area if AT&T's antennas are located on the building's roof at the height and in the configuration requested. The importance of a facility at this location is underscored by AT&T's interest in enhancing its ability to provide its most up-to-date wireless technology, known as long-term evolution technology ("LTE"), in this area to satisfy its customers' ever-increasing needs for high-speed data services. Radio frequency coverage maps included in the report are provided to pictorially and vividly show the differences in existing and proposed wireless coverage at the various bands authorized for AT&T's service. The maps show dramatic improvements to wireless coverage at all three (3) bands with the inclusion of the proposed Facility, namely, at 700, 1900, and 2100 MHz.

V. THE FEDERAL SPECTRUM ACT AND THE FCC ORDER

As set forth below, the proposed modifications constitute an Eligible Facilities Request pursuant to the federal Spectrum Act,³ as further implemented by the FCC Order.⁴

³ Pursuant to Section 6409(a)(2) an "eligible facilities request" means any request for modification of an existing wireless tower or base station that involves—

- (A) collocation of new transmission equipment;
- (B) removal of transmission equipment; or
- (C) replacement of transmission equipment.

47 U.S.C. § 1455(a)(2).

⁴ The Order was effective on February 9, 2015, except for § 1.40001, which became effective on April 8, 2015, except for §§ 1.40001(c)(3)(i), 1.40001(c)(3)(iii), 1.140001(c)(4), and 17.4(c)(1)(vii), which became effective on May 18, 2015, after approval by the Office of Management and Budget. The FCC Order makes clear that under the Spectrum Act discretionary review is not required or permitted for an Eligible Facilities Request.

Under the Spectrum Act, as further clarified by the FCC Order, the streamlined process for this Eligible Facilities Request is limited to non-discretionary review. Specifically, the FCC Order “adopt[s] an objective standard for determining when a proposed modification will ‘substantially change the physical dimensions’ of an existing tower or base station.” *FCC Order*, ¶ 87. As stated in the FCC Order, Section 6409 “states without equivocation that the reviewing authority ‘may not deny, and shall approve’ any qualifying application. This directive leaves no room for a lengthy and discretionary approach to reviewing an application that meets the statutory criteria.” *FCC Order*, ¶ 116.

In issuing the FCC Order and eliminating discretionary review for eligible facilities requests, the FCC’s goal was to “adopt a test that is defined by specific, objective factors rather than the contextual and entirely subjective standard advocated by the IAC and municipalities.” The FCC intentionally sought to reduce “flexibility” and “open ended context-specific approach” engendered by the discretionary review process:

While we acknowledge that the IAC approach would provide municipalities with maximum flexibility to consider potential effects, we are concerned that it would invite lengthy review processes that conflict with Congress’s intent. Indeed, some municipal commenters anticipate their review of covered requests under a subjective, case-by-case approach could take even longer than their review of collocations absent Section 6409(a). We also anticipate that disputes arising from a subjective approach would tend to require longer and more costly litigation to resolve given the more fact-intensive nature of the IAC’s open-ended and context-specific approach. We find that an objective definition, by contrast, will provide an appropriate balance between municipal flexibility and the rapid deployment of covered facilities. We find further support for this approach in State statutes that have implemented Section 6409(a), all of which establish objective standards.

FCC Order, ¶ 88.

As a result, the FCC Order implementing Section 6409 establishes clear and objective criteria for determining eligibility, limits the types of information that a municipality may require when processing an application for an eligible facilities request, and imposes a “deemed granted” remedy for failure to timely process and eligible facilities request.⁵ The FCC Order also establishes significant limits on the information that can be required to be provided with an eligible facilities request and limits it to only that information “reasonably related to determining whether the request meets the requirements of this section. A State or local government may not require an applicant to submit any other documentation”. 47 CFR 1.40001(c)(1).

Both before and after the FCC Order was issued, the Massachusetts Attorney General’s Office provided clear guidance that an eligible request cannot be subjected to a discretionary special permit process. *See* Attorney General’s letters to (i) Town of Mount Washington, dated June 12, 2014, p. 3 (ii) Town of Lynnfield, dated February 10, 2015, p. 3 (the “AG Lynnfield Letter”) and

⁵ *See* 47 CFR §§1.40001(c)(1) - (c)(4).

(iii) Town of Montague, dated February 23, 2015, p. 2 (all attached hereto). As set forth in each letter [t]he Act’s requirement that a local government ‘may not deny, and shall approve, any eligible facilities request’ means that a request for modification to an existing facility that does not substantially change the physical dimensions of the tower or base station must be approved. ***Such qualifying requests also cannot be subject to a discretionary special permit.***”(Emphasis added). In providing these opinions, the Attorney General’s Office specifically opined that provisions in zoning ordinances that specifically required a special permit for modifications to existing facilities could not be applied to eligible facilities requests. While approving the Town of Lynnfield’s Zoning Bylaw, the Attorney General stated that “Section 8.7.5.1 requires that PWSF may only be erected upon the grant of a special permit. The Town cannot apply this requirement to eligible facilities requests for modification to existing facilities that qualify for required approval under Section 6409 of the Act.” *AG Lynnfield Letter*, p. 3.

Therefore, as set forth in the FCC Order and Attorney General’s opinion letters, the City cannot impose a requirement that AT&T obtain a special permit, or an amendment to an existing special permit utilizing the same discretionary review process, in connection with its eligible facilities request. To the extent that the City of Cambridge’s Zoning Ordinance and any prior decisions by the Board include provisions seeking to further regulate the modification of wireless communication facilities, federal law overrules those requirements. *See Sprint Spectrum L.P. v. Town of Swansea*, 574 F.Supp.2d 227, 236 (2008) (Board is obligated to consider whether its actions would violate federal law even if a different outcome would be permitted under state law). The standard of review for an application to modify an existing wireless communication facility on an existing tower or base station is governed by the Spectrum Act and the FCC Order which require eligible facilities requests to be permitted “by right.”

In addition, the FCC Order establishes a 60-day period for approval from the time of AT&T’s submission. 47 CFR §1.40001(c)(2). Within the context of the Spectrum Act and FCC Order, approval means all necessary approvals to permit the proposed modifications, including the issuance of a building permit, if required. The FCC found that this 60-day period is appropriate due to “the more restricted scope of review applicable to applications under section 6409(a).” *FCC Order*, ¶ 108. If the Request is not acted upon within the 60-day period, it is deemed granted. 47 CFR §1.40001(c)(4).

As set forth below, the proposed modifications constitute an eligible facilities request. Therefore, AT&T respectfully requests the Board to find that Section 4.32(g)(1) of the Ordinance does not apply to its Request.

VI. THE PROPOSED MODIFICATIONS ARE AN ELIGIBLE FACILITIES REQUEST

Under Section 6409 and the FCC Order, a “base station” means “[a] structure or equipment at a fixed location that enables Commission-licensed or authorized wireless communications between user equipment and a communications network.” 47 C.F.R §1.40001(b)(1). A Base Station includes “any structure other than a tower” that supports or houses “authorized wireless communications between user equipment and a communications network.” 47 C.F.R

§1.40001(b)(1). Therefore, the existing building that is currently used for FCC-licensed transmissions for personal wireless services is a “base station” for purposes of Section 6409.

AT&T proposes to modify its existing Facility as described above and depicted on the Plans submitted herewith.

The proposed modifications to the existing Facility will incorporate the concealment elements of the Facility’s design and will continue to integrate the Facility into the existing architecture of the building by painting and texturing the new replacement antennas to match the existing facade. Therefore, AT&T’s proposed Facility will remain aesthetically consistent with the exterior finish of the building as well as maintain the concealment elements of the original design.

AT&T proposes to replace one existing power cabinet and to add one additional radio communications equipment cabinets on the roof of the building. The proposed modifications will not require the installation of any part of the facility on the ground outside of the building.

As a result, AT&T’s proposed modifications involving the removal and replacement of the existing transmission equipment constitute an “eligible facilities request” under Section 6409. The proposed eligible facilities request is not a “substantial modification” under Section 6409 and the FCC Order because it does not:

- (i) Result in an increase in “the height of the structure by more than 10% or more than ten feet, whichever is greater” because the proposed façade mounted antennas will not exceed 10 feet above the existing building;
- (ii) Protrude from the edge of the edge of the building by more than six feet because AT&T’s proposed modifications will not protrude more than six feet from building façade;
- (iii) Involve the installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets because one power cabinet will be replaced and only one new radio communications equipment cabinet will be installed;
- (iv) Require any excavation or deployment outside the current site of the tower or base station because all antennas, equipment cabinets and related equipment will be installed on entirely on the existing building; or
- (v) Otherwise defeat the existing concealment elements of the tower or base station because the proposed antennas will be painted and textured to match the façade of the existing building on which the existing and proposed antennas will be located and will continue to integrate the Facility into the existing architecture of the building. Further, the proposed RRUs and surge arrestor will be mounted behind an existing screenwall or otherwise mounted out of view. Therefore, AT&T’s proposed Facility will remain aesthetically consistent with the exterior finish of the building as well as maintain the concealment elements of the original design.

See FCC Order, §1.40001(b)(7)(i)-(v).

V. COMPLIANCE WITH THE CAMBRIDGE ZONING ORDINANCE

In the alternative, AT&T respectfully requests the Board to grant a special permit for the proposed modifications to the existing Facility.⁶

A. **AT&T complies with the Wireless Communications provisions set forth in Section 4.32(g)(1), and Section 4.40, Footnote 49 of the Ordinance.**

AT&T's proposed modifications comply with Section 4.32(g)(1), and Section 4.40, Footnote 49 of the Ordinance as follows:⁷

Section 4.32(g)(1): Section 4.32(g)(1) of the Ordinance allows for the use of a “[t]elephone exchange (including switching, relay, and transmission facilities serving mobile communications systems) and any towers or antennas accessory thereto.” Under the Table of Use Regulations beginning at Section 4.30, AT&T's proposed use of the Facility as a transmission facility serving a mobile communications system is permitted by special permit in the IB zoning district (see the table at Section 4.32(g)(1)).

Section 4.40, Footnote 49: Section 4.32(g)(1) includes a reference to Section 4.40, Footnote 49 which sets out the standards for granting the special permit. AT&T's proposed Facility complies with Footnote 49's standards as noted below:

- 1. The Board of Zoning Appeal shall consider “[t]he scope of or limitations imposed by any license secured from any state or federal agency having jurisdiction over such matters.”**

AT&T's Response: AT&T's FCC license is included with this application and the license information included shows that AT&T is authorized to provide wireless service in the area served by the Facility (see Exhibit 2).

- 2. The Board of Zoning Appeal shall consider “[t]he extent to which the visual impact of the various elements of the proposed facility is minimized: (1) through the use of existing mechanical elements on the building's roof or other features of the building as support and background, (2) through the use in materials that in texture and color blend with the materials to which the facilities are attached, or (3) other effective means to reduce the visual impact of the facility on the site.”**

⁶ AT&T's request is made, if and to the extent necessary, all rights reserved. As discussed above, the FCC Order establishes a 60-day period for receipt of all necessary approvals from the time of AT&T's submission, including a building permit, if required. 47 CFR §1.40001(c)(2). If the Request is not acted upon within the 60-day period, it is deemed granted. 47 CFR §1.40001(c)(4). Therefore, AT&T expressly reserves its rights under 47 CFR §1.40001(c)(2) and (4).

⁷ To the extent that Section 4.32(g)(1), and Section 4.40, Footnote 49 of the Ordinance purport to require the submission of information that is beyond the scope permitted by the FCC Order or Spectrum Act, AT&T expressly reserves, and does not waive, its right to assert that such information is not required under the Spectrum Act and the submission of such information shall not constitute a waiver of AT&T's rights pursuant thereto.

AT&T's Response: The design of the overall Facility, including the choice and placement of replacement antennas and associated equipment, on the penthouse and building façade exteriors, minimizes the visual impact of the proposed Facility. This is because the antennas and equipment on the exterior façade surfaces will be painted to match the color and texture of the building so as to be minimally visible and consistent with the concealment elements of the existing Facility. The minimal visual impact of the Facility is shown in the photographs of the existing Facility and the photosimulations that superimpose the proposed modifications to the existing Facility (*see*, Exhibit 5).

- 3. The Board of Zoning Appeal shall consider “[w]here it is proposed to erect such a facility in any residential zoning district, the extent to which there is a demonstrated public need for the facility at the proposed locations, the existence of alternative, functionally suitable sites in nonresidential locations, the character of the prevailing uses in the area, and the prevalence of other existing mechanical systems and equipment carried on or above the roof of nearby structures. The Board of Zoning Appeal shall grant a special permit to erect such a facility in a residential zoning district only upon finding that nonresidential uses predominate in the vicinity of the proposed facility’s location and that the telecommunications facility is not inconsistent with the character that does prevail in the surrounding neighborhood.**

In granting a special permit the Board of Zoning Appeal shall set forth in its decision under which circumstances or procedures, if any, the permittee shall be allowed to replace and upgrade its equipment without the necessity of seeking a new special permit.”

AT&T's Response: As demonstrated by the Radio Frequency Report and the associated coverage maps, AT&T has demonstrated an immediate and compelling need for the proposed modifications to its existing Facility located at the Property in order to provide substantially improved indoor coverage to residents, businesses, students and faculty, and the general public in that area.⁸ AT&T also seeks to substantially improve its ability to satisfy the ever-increasing need of its customers for data accessibility, navigation and use. This is especially critical in and around the area of Portland and Broadway which also serves as home for numerous businesses. AT&T proposes to satisfy its RF coverage needs in the area by adding to the existing Facility the antennas and equipment necessary to provide the latest LTE wireless communications service technology. By modifying its existing Facility, AT&T obviates the need to construct an entirely new facility within this area of Cambridge in order to meet its wireless network coverage needs.

As provided in Footnote 49, AT&T requests that once permission is received from the City to site the Facility at the Property, the Board permit AT&T to replace and upgrade the equipment at this Facility in the future without further zoning proceedings or a new special permit, provided that such equipment shall meet the eligible facilities request criteria set forth in 47 CFR § 1.40001.

⁸ AT&T must generate a signal strength of at least -74 dBm to provide serviceable voice and data coverage on its mobile wireless devices in indoor environments. AT&T also seeks to substantially improve its data navigation service coverage in the area by including antennas and equipment that will provide LTE service.

B. AT&T complies with the Special Permit Criteria set forth in Section 10.43 of the Ordinance.

Section 10.43 of the Ordinance specifies the following criteria for issuance of a special permit: “Special permits will normally be granted where specific provisions of this Ordinance are met, except when particulars of the location or use, not generally true of the district or of the uses permitted in it, would cause granting of such permit to be to the detriment of the public interest because:

(a) The requirements of this Ordinance cannot or will not be met, or

AT&T’s Response: As provided above, AT&T’s proposed modifications comply with the requirements set forth in Section 4.32(g), Footnote 49 of the Ordinance, the Spectrum Act and the eligible facilities request criteria set forth in 47 CFR § 1.40001. Granting the special permit would not be a detriment to the public interest and is consistent with the Board’s obligations pursuant to the Spectrum Act and FCC Order..

(b) Traffic generated or patterns of access or egress would cause congestion, hazard, or substantial change in established neighborhood character for the following reasons, or

AT&T’s Response: The proposed modifications to AT&T’s existing Facility will not result in any change to the existing traffic on or near the Property. The Facility will continue to be unmanned and only require infrequent visits by a technician (typically two times per month for routine diagnostics and/or maintenance, except in cases of emergency), there will be no material increase in traffic or disruption to patterns of access or egress that will cause congestion, hazards or a substantial change in the established neighborhood character. AT&T’s maintenance personnel will make use of the existing access roads and parking at the building. Granting the special permit would not be a detriment to the public interest and is consistent with the Board’s obligations pursuant to the Spectrum Act and FCC Order.

(c) The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would be adversely affected by the nature of the proposed use, or

AT&T’s Response: As described above and illustrated on the attached photographs and photosimulations (*see* Exhibit 5) the proposed modifications to the existing Facility will result in a *de minimis* change in the appearance of the building because the equipment will be located on building exterior surfaces in the colors and textures of the building and will be consistent with the concealment elements of the existing Facility. As a result, the Facility as a whole either will be hidden from view or will visually blend with existing characteristics of the building and the surrounding neighborhood. Because the proposed installation will not generate any traffic, smoke, dust, heat or glare, discharge noxious substances, nor pollute waterways or groundwater, it will not adversely affect residential uses on neighboring streets. Conversely, the surrounding properties and general public will benefit from the potential to enjoy improved wireless communications services.

Granting the special permit would not be a detriment to the public interest and is consistent with the Board's obligations pursuant to the Spectrum Act and FCC Order.

(d) Nuisance or hazard would be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the citizens of the City, or

AT&T's Response: Because the proposed modifications to the existing Facility will not cause the Facility to generate any traffic, smoke, dust, heat or glare, discharge noxious substances, nor pollute waterways or groundwater, no nuisance or hazard will be created to the detriment of the health, safety, or welfare of the occupants of the building or the residents of the City of Cambridge. To the contrary, the proposed Facility will benefit the City and promote the safety and welfare of its residents, businesses and drivers by providing reliable state-of-the-art digital wireless voice and data services that will improve the reliability of emergency communications with the police and fire departments by eliminating dropped or blocked calls due to inadequate signal strength or insufficient network capacity to handle call volume, particularly important during emergency situations. The Facility, as modified, will continue to comply with all federal, state and local safety requirements including the standards established by the FCC and Federal Aviation Administration (FAA). (*See Exhibit 8 Maximum Permissible Exposure Study, Theoretical Report*). Granting the special permit would not be a detriment to the public interest and is consistent with the Board's obligations pursuant to the Spectrum Act and FCC Order.

(e) For other reasons, the proposed installation would impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this Ordinance, or

AT&T's Response: The purpose of the Ordinance is multifaceted, the relevant aspects of which relating to wireless telecommunications facilities include the lessening of congestion in the streets, conserving health, securing safety from fire, flood, panic and other danger, conserving the value of land and buildings and natural resources, preventing blight and pollution, encouraging the most rational use of land throughout the city, including encouraging appropriate economic development, and protecting residential neighborhoods from incompatible activities.

As noted above, the proposed modifications to the existing Facility directly accord with the purposes of the Ordinance because the modifications will not result in any traffic, smoke, dust, heat or glare, discharge noxious substances, nor pollute waterways or groundwater. As the Facility will improve the ability of residents, businesses, travelers and drivers in the area to access state-of-the-art wireless technology, the City's ability to provide emergency services will be improved, as will the economic development of the City as more people will be able to conduct commerce by virtue of a mobile platform. Because the proposed modifications to the existing Facility will be installed on an existing building that includes the Facility, screenwall and other rooftop amenities, and the proposed modifications are consistent with the existing concealment elements, the proposed modifications to the existing Facility are in consistent with the building's character and will not affect the value of the building or the natural resources of the City. Because the proposed modifications to the existing Facility are designed to be consistent with the existing concealment

elements of the Facility and characteristics of the Property, the visual impact on the underlying and adjacent zoning districts will be *de minimis*. As a result, the proposed modifications to the existing Facility are consistent with the Ordinance's purpose to allow for less intrusive wireless telecommunications facilities in all districts (other than Open Space) including the applicable overlay districts, and the underlying IB district. Granting the special permit would not be a detriment to the public interest and is consistent with the Board's obligations pursuant to the Spectrum Act and FCC Order.

(f) The new use or building construction is inconsistent with the Urban Design Objectives set forth in Section 19.30

AT&T's Response: As stated in the Section 19.30, the Citywide Urban Design Objectives ("Objectives") "are intended to provide guidance to property owners and the general public as to the city's policies with regard to the form and character desirable for new development in the city. It is understood that application of these principles can vary with the context of specific building proposals in ways that, nevertheless, fully respect the policies' intent. It is intended that proponents of projects, and city staff, the Planning Board and the general public, where public review or approval is required, should be open to creative variations from the detailed provisions presented in this Section as long as the core values expressed are being served. *A project need not meet all the objectives of this Section 19.30 where this Section serves as the basis for issuance of a special permit. Rather the permit granting authority shall find that on balance the objectives of the city are being served.* Nor shall a project subject to special permit review be required to conform to the Required Building and Site Plan Requirements set forth in Section 11.50." [emphasis added]. For the reasons stated in AT&T's response to this Section 10.43(f) of the Zoning Ordinance and in its application generally, "on balance, the objectives of the city are being served" by the installation of the Facility at the Property so that granting the special permit would not be a detriment to the public interest and is consistent with the Board's obligations pursuant to the Spectrum Act and FCC Order..

The following are the Objectives' headings as appearing in the Ordinance:

19.31: New projects should be responsive to the existing or anticipated pattern of development.

AT&T's Response: The existing Facility is located on the rooftop of the existing building, some of the equipment of which is hidden from view behind the screenwall, or otherwise obstructed from view, and the remaining equipment blends with the structures and colors of the building. The proposed modifications to the existing Facility are consistent with the design and concealment elements of the existing Facility. Therefore, the proposed modifications are responsive to the existing pattern of development in the Property's applicable zoning and overlay districts.

19.32: Development should be pedestrian and bicycle-friendly, with a positive relationship to its surroundings.

AT&T's Response: The existing Facility is located on the roof of an existing building. The Facility is only accessed by authorized AT&T personnel for routine maintenance one to two times per month and is not accessed by the general public. The proposed modifications to the existing Facility will not result in any increase in routine visits nor otherwise result in a change in traffic

patterns in the vicinity of the Property that would affect pedestrian flow or cyclists' access to the building or surrounding areas within the Property's applicable zoning districts.

19.33 The building and site design should mitigate adverse environmental impacts of a development upon its neighbors. Indicators include⁹

(1) Mechanical equipment that is carefully designed, well organized or visually screened from its surroundings and is acoustically buffered from neighbors. Consideration is given to the size, complexity and appearance of the equipment, its proximity to residential areas, and its impact on the existing streetscape and skyline. The extent to which screening can bring order, lessen negative visual impacts, and enhance the overall appearance of the equipment should be taken into account. More specifically:

(a) Reasonable attempts have been made to avoid exposing rooftop mechanical equipment to public view from city streets. Among the techniques that might be considered are the inclusion of screens or a parapet around the roof of the building to shield low ducts and other equipment on the roof from view.

(b) Treatment of the mechanical equipment (including design and massing of screening devices as well as exposed mechanical elements) that relates well to the overall design, massing, scale and character of the building.

(c) Placement of mechanical equipment at locations on the site other than on the rooftop (such as in the basement), which reduces the bulk of elements located on the roof; however, at-grade locations external to the building should not be viewed as desirable alternatives.

(d) Tall elements, such as chimneys and air exhaust stacks, which are typically carried above screening devices for functioning reasons, are carefully designed as features of the building, thus creating interest on the skyline.

(e) All aspects of the mechanical equipment have been designed with attention to their visual impact on adjacent areas, particularly with regard to residential neighborhoods and views and vistas.

AT&T's Response: As shown in the photosimulations (*see* Exhibit 5), the existing Facility, as proposed to be modified herein, will continue to be visually consistent with the color and texture of the building, the concealment elements of the design of the Facility, and with other existing rooftop equipment. As a result, AT&T's Facility is in keeping with the building's existing features without adversely affecting the building's overall design, massing, scale or character.

⁹ Inasmuch as Section 19.33 is most relevant to the Facility, it is stated here in full.

(2) Trash that is handled to avoid impacts (noise, odor, and visual quality) on neighbors, e.g. the use of trash compactors or containment of all trash storage and handling within a building is encouraged.

AT&T's Response: The Facility does not generate trash, therefore this design objective is inapplicable.

(3) Loading docks that are located and designed to minimize impacts (visual and operational) on neighbors.

AT&T's Response: The Facility does not utilize any loading dock, therefore this design objective is inapplicable.

(4) Stormwater Best Management Practices and other measures to minimize runoff and improve water quality are implemented.

AT&T's Response: The existing Facility, and the proposed modifications, are located entirely on the existing Building on the Property and have no effect on stormwater runoff, therefore this design objective is inapplicable.

(5) Landscaped areas and required Green Area Open Space, in addition to serving as visual amenities, are employed to reduce the rate and volume of stormwater runoff compared to pre-development conditions.

AT&T's Response: The existing Facility and proposed modifications have no effect any landscaped or Green Area Open Space, therefore this design objective is inapplicable.

(6) The structure is designed and sited to minimize shadow impacts on neighboring lots, especially shadows that would have a significant impact on the use and enjoyment of adjacent open space and shadows that might impact the operation of a Registered Solar Energy System as defined in Section 22.60 of this Zoning Ordinance.

AT&T's Response: The existing Facility and proposed modifications are designed so as not to cause shadows on neighboring lots.

(7) Changes in grade across the lot are designed in ways that minimize the need for structural retaining walls close to property lines.

AT&T's Response: The existing Facility and proposed modifications are located entirely on the existing building and have no impact on the grade of the Property, therefore this design objective is inapplicable.

(8) Building scale and wall treatment, including the provision of windows, are sensitive to existing residential uses on adjacent lots.

AT&T's Response: The proposed modifications to the existing Facility will not change the building's scale because antennas and equipment will blend with the color and

textures of the building (*see* Exhibit 3). The existing Facility and proposed modifications are consistent with characteristics of the existing building design, maintain the existing concealment elements of the Facility and therefore minimize any visual impact from the Facility.

(9) Outdoor lighting is designed to provide minimum lighting and necessary to ensure adequate safety, night vision, and comfort, while minimizing light pollution.

AT&T's Response: The existing Facility does not use any outdoor lighting except localized lighting for nighttime repairs. The proposed modifications to the Facility do not include any additional lighting of the Facility or building. As a result, this design objective is inapplicable.

(10) The creation of a Tree Protection Plan that identifies important trees on the site, encourages their protection, or provides for adequate replacement of trees lost to development on the site.

AT&T's Response: The existing Facility and proposed modifications are located entirely on the existing building and have no effect on any trees on the Property, therefore this design objective is inapplicable.

19.34: Projects should not overburden the City infrastructure services, including neighborhood roads, city water supply system, and sewer system.

AT&T's Response: The existing Facility, including the proposed modifications, is a passive use and will not generate trash, odor, excess noise, or utilize water or wastewater services. As such, it will not burden the City's infrastructure services.

19.35: New construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically.

AT&T's Response: The proposed modification of the existing Facility located on the existing building, will obviate the need for AT&T to construct an additional Facility to address its wireless network coverage need in this area of Cambridge. The existing Facility and the proposed modifications blend the equipment with the building texture and color, and are consistent with the concealment elements of the Facility's design. As a result, the Facility will reinforce the existing Cambridge landscape as it currently is manifested at the Property.

19.36: Expansion of the inventory of housing in the city is encouraged.

AT&T's Response: The Facility and proposed modifications provide wireless services and will not adversely impact the City's housing inventory.

19.37. Enhancement and expansion of open space amenities in the city should be incorporated into new development in the city.

AT&T's Response: The Facility and proposed modifications are located on an existing building. The Facility and proposed modifications will not adversely impact or otherwise reduce open space amenities within the City.

SUMMARY

For the foregoing reasons AT&T respectfully requests that the Board to determine that pursuant to the Spectrum Act and the FCC Order, the Request constitutes and eligible facilities request and therefore AT&T's Request must be approved administratively, including the issuance of a building permit, without the need for further relief from the Board. In the alternative, without waiving its rights, AT&T requests the Board grant the foregoing zoning relief in the form of a Special Permit and such other relief as the Board deems necessary to allow the modification and operation of AT&T's proposed Facility.

Best Regards,

Timothy W. Greene
Authorized Agent to New Cingular Wireless PCS, LLC ("AT&T")

cc: Brian S. Grossman, Esq.

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: AT&T MOBILITY SPECTRUM LLC

ATTN: REGINALD YOUNGBLOOD
AT&T MOBILITY SPECTRUM LLC
3300 E. RENNER ROAD, B3132
RICHARDSON, TX 75082

Call Sign WQJU427	File Number
Radio Service WY - 700 MHz Lower Band (Blocks A, B & E)	

FCC Registration Number (FRN): 0014980726

Grant Date 01-06-2009	Effective Date 02-12-2014	Expiration Date 06-13-2019	Print Date
Market Number CMA006	Channel Block B	Sub-Market Designator 0	
Market Name Boston-Lowell-Brockton-Lawrenc			
1st Build-out Date 12-13-2016	2nd Build-out Date 06-13-2019	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This license is subject to compliance with the conditions set forth in the Commission's Order of Modification, WT Docket No. 12-69, DA 14-43, released January 16, 2014.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

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**Federal Communications Commission
Wireless Telecommunications Bureau**

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: REGINALD YOUNGBLOOD
NEW CINGULAR WIRELESS PCS, LLC
3300 E. RENNER ROAD, B3132
RICHARDSON, TX 75082

Call Sign KNKA226	File Number
Radio Service CL - Cellular	
Market Numer CMA006	Channel Block A
Sub-Market Designator 0	

FCC Registration Number (FRN): 0003291192

Market Name Boston-Lowell-Brockton-Lawrenc
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Grant Date 10-05-2004	Effective Date 02-13-2014	Expiration Date 10-01-2014	Five Yr Build-Out Date	Print Date
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Site Information:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	42-37-42.3 N	070-39-16.8 W	45.7	58.8	

Address: 40 DORY ROAD

City: GLOUCESTER **County:** ESSEX **State:** MA **Construction Deadline:**

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	93.100	97.500	101.800	101.800	100.800	88.700	85.700	101.800
Transmitting ERP (watts)	158.853	205.617	68.628	9.427	0.642	0.431	2.268	29.488
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	93.100	97.500	101.800	101.800	100.800	88.700	85.700	101.800
Transmitting ERP (watts)	0.459	5.462	56.429	198.529	168.403	38.276	3.953	0.786
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	93.100	97.500	101.800	101.800	100.800	88.700	85.700	101.800
Transmitting ERP (watts)	12.078	0.668	0.599	1.024	10.050	68.014	123.413	62.132

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKA226

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
20	43-03-11.8 N	071-16-02.1 W	179.2	59.4	

Address: 80 Diamond Hill Road

City: Candia County: ROCKINGHAM State: NH Construction Deadline:

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.200	111.000	159.400	159.000	98.400	148.300	88.600	75.600
Transmitting ERP (watts)	52.325	70.778	16.988	1.425	0.187	0.144	0.491	7.084
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.200	111.000	159.400	159.000	98.400	148.300	88.600	75.600
Transmitting ERP (watts)	0.343	3.851	33.085	100.313	84.855	19.494	2.061	0.299
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.200	111.000	159.400	159.000	98.400	148.300	88.600	75.600
Transmitting ERP (watts)	6.845	0.890	0.107	1.038	6.652	7.633	3.304	6.905

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	42-54-55.1 N	071-21-37.4 W	100.9	46.3	1011624

Address: 15 INDEPENDENCE DRIVE

City: LONDONDERRY County: ROCKINGHAM State: NH Construction Deadline:

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	35.900	30.000	44.800	52.100	54.500	72.000	68.000	66.500
Transmitting ERP (watts)	161.221	224.756	47.602	3.692	0.510	0.437	1.233	19.454
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	35.900	30.000	44.800	52.100	54.500	72.000	68.000	66.500
Transmitting ERP (watts)	0.510	3.172	43.604	213.248	156.639	22.374	1.350	0.496
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	35.900	30.000	44.800	52.100	54.500	72.000	68.000	66.500
Transmitting ERP (watts)	11.168	0.691	0.533	0.586	7.854	87.092	266.329	94.294

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKA226

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
25	42-00-32.6 N	071-19-15.2 W	90.5	51.8	

Address: 75 WASHINGTON SST

City: PLAINVILLE County: NORFOLK State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	64.500	61.200	95.600	96.100	94.300	64.100	46.000	48.800
Transmitting ERP (watts)	84.752	97.052	31.772	5.158	0.550	0.224	2.803	20.645
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	64.500	61.200	95.600	96.100	94.300	64.100	46.000	48.800
Transmitting ERP (watts)	0.380	5.181	37.013	100.829	79.042	20.699	2.118	0.824
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	64.500	61.200	95.600	96.100	94.300	64.100	46.000	48.800
Transmitting ERP (watts)	24.577	1.736	0.715	2.292	18.444	139.378	281.180	142.336

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
26	41-46-57.1 N	070-44-06.5 W	12.5	58.8	

Address: KENDRICK ROAD

City: WAREHAM County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	46.500	56.700	59.800	50.600	39.100	32.800
Transmitting ERP (watts)	186.898	242.551	75.777	10.617	0.738	0.508	2.730	35.860
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	46.500	56.700	59.800	50.600	39.100	32.800
Transmitting ERP (watts)	0.361	5.818	47.861	150.309	121.062	28.493	2.933	0.991
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	46.500	56.700	59.800	50.600	39.100	32.800
Transmitting ERP (watts)	18.390	1.111	0.538	1.628	13.482	98.897	203.625	103.938

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKA226

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	41-53-35.2 N	070-56-35.0 W	17.7	106.1	1210211

Address: 326 W GROVE ST

City: Middleboro County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	47.500	46.300	30.000	37.000	40.900	39.500	51.600	42.300
Transmitting ERP (watts)	125.283	153.432	54.208	6.550	0.674	0.363	2.675	27.340
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	47.500	46.300	30.000	37.000	40.900	39.500	51.600	42.300
Transmitting ERP (watts)	0.351	5.901	52.455	151.828	120.612	27.887	2.679	0.991
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	47.500	46.300	30.000	37.000	40.900	39.500	51.600	42.300
Transmitting ERP (watts)	14.428	1.006	0.875	1.215	13.317	87.541	159.641	85.795

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
28	42-14-21.9 N	070-51-09.3 W	54.9	55.8	

Address: 168 Turkey Hill Lane

City: Cohasset County: NORFOLK State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.800	98.300	97.600	71.700	64.800	62.900	86.700	99.100
Transmitting ERP (watts)	185.522	243.217	80.727	11.598	0.756	0.499	2.589	34.953
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.800	98.300	97.600	71.700	64.800	62.900	86.700	99.100
Transmitting ERP (watts)	0.521	6.371	65.693	238.024	196.107	43.191	4.256	0.906
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.800	98.300	97.600	71.700	64.800	62.900	86.700	99.100
Transmitting ERP (watts)	9.488	0.543	0.538	1.234	8.977	53.553	85.290	45.661

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKA226

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	41-56-02.0 N	070-35-08.0 W	82.9	128.0	1007828

Address: 265 STATE ROAD

City: PLYMOUTH County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.000	128.000	128.000	123.500	92.200	86.600	84.900	120.500
Transmitting ERP (watts)	23.222	24.154	10.475	1.931	0.466	0.109	1.398	6.965
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.000	128.000	128.000	123.500	92.200	86.600	84.900	120.500
Transmitting ERP (watts)	0.346	4.427	33.055	88.168	72.485	17.790	1.831	0.701
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.000	128.000	128.000	123.500	92.200	86.600	84.900	120.500
Transmitting ERP (watts)	9.680	0.561	0.550	1.216	9.292	54.685	90.439	45.409

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
30	42-12-47.6 N	071-32-33.4 W	128.0	58.5	

Address: 26 LUMBER STREET

City: HOPKINTON County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.900	93.200	99.800	91.500	55.300	59.600	35.700	76.400
Transmitting ERP (watts)	158.662	188.312	64.228	8.830	0.704	0.395	4.080	30.535
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.900	93.200	99.800	91.500	55.300	59.600	35.700	76.400
Transmitting ERP (watts)	0.432	6.612	61.028	195.296	166.263	35.500	3.748	0.703
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.900	93.200	99.800	91.500	55.300	59.600	35.700	76.400
Transmitting ERP (watts)	18.831	1.074	0.590	1.783	15.144	103.799	219.501	97.060

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
31	42-38-27.0 N	070-36-24.8 W	36.6	38.7	

Address: 38 Thatcher Rd

City: ROCKLAND County: ESSEX State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.500	69.500	69.500	69.500	69.500	66.700	58.400	60.100
Transmitting ERP (watts)	170.519	227.554	76.127	10.393	0.706	0.470	2.520	32.796
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.500	69.500	69.500	69.500	69.500	66.700	58.400	60.100
Transmitting ERP (watts)	0.462	5.689	58.840	206.264	174.760	39.385	4.197	0.837
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.500	69.500	69.500	69.500	69.500	66.700	58.400	60.100
Transmitting ERP (watts)	20.761	1.510	0.812	1.238	15.269	110.467	237.338	124.965

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
32	42-36-37.9 N	071-33-28.9 W	148.4	46.3	

Address: 142 LOWELL RD

City: GROTON County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	129.600	133.000	121.700	118.300	83.000	99.300	81.700	86.000
Transmitting ERP (watts)	209.658	291.175	91.511	11.206	1.156	0.596	4.998	40.617
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	129.600	133.000	121.700	118.300	83.000	99.300	81.700	86.000
Transmitting ERP (watts)	0.597	10.042	80.421	284.569	246.599	46.898	5.186	0.906
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	129.600	133.000	121.700	118.300	83.000	99.300	81.700	86.000
Transmitting ERP (watts)	18.748	1.375	0.781	1.196	15.487	106.791	230.014	118.184

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
33	42-08-01.1 N	070-43-57.5 W	68.3	80.5	1017973

Address: 178 EAMES WAY

City: Marshfield County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	125.300	128.600	128.200	125.800	107.800	113.100	97.600	105.400
Transmitting ERP (watts)	156.993	202.510	73.503	10.210	0.666	0.415	2.429	32.615
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	125.300	128.600	128.200	125.800	107.800	113.100	97.600	105.400
Transmitting ERP (watts)	0.482	5.988	62.083	217.536	187.313	40.576	4.382	0.869
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	125.300	128.600	128.200	125.800	107.800	113.100	97.600	105.400
Transmitting ERP (watts)	21.007	1.466	0.829	1.219	15.907	109.305	228.002	122.541

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
34	41-42-11.1 N	070-46-47.1 W	14.3	59.4	

Address: 55 BENSONBROOK ROAD

City: MARION County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	62.700	66.200	68.700	66.600	60.600	47.100	51.900
Transmitting ERP (watts)	161.079	196.082	67.519	9.213	0.702	0.419	4.077	32.479
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	62.700	66.200	68.700	66.600	60.600	47.100	51.900
Transmitting ERP (watts)	0.446	6.712	62.074	197.767	163.770	38.273	3.886	0.801
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	62.700	66.200	68.700	66.600	60.600	47.100	51.900
Transmitting ERP (watts)	3.819	0.784	0.433	6.729	64.256	202.261	164.916	37.606

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
35	42-21-20.1 N	071-33-16.6 W	156.1	26.5	

Address: 157 UNION STREET

City: MARLBOROUGH County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	97.800	119.900	113.500	108.400	76.200	73.000	51.900	77.300
Transmitting ERP (watts)	280.304	377.489	119.970	14.810	1.525	0.802	6.660	52.209
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	97.800	119.900	113.500	108.400	76.200	73.000	51.900	77.300
Transmitting ERP (watts)	0.801	13.105	105.660	375.949	325.389	63.339	6.978	1.142
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	97.800	119.900	113.500	108.400	76.200	73.000	51.900	77.300
Transmitting ERP (watts)	30.606	2.831	1.046	2.632	27.909	187.774	419.392	197.441

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
36	42-39-54.6 N	070-38-19.9 W	59.4	44.5	

Address: 68 JOHNSON ROAD

City: ROCKPORT County: ESSEX State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	103.000	103.000	103.000	100.400	95.400	85.100	98.100	103.000
Transmitting ERP (watts)	126.741	159.124	54.189	7.443	0.564	0.334	3.098	25.685
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	103.000	103.000	103.000	100.400	95.400	85.100	98.100	103.000
Transmitting ERP (watts)	0.353	5.360	49.103	157.255	130.117	30.639	2.895	0.641
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	103.000	103.000	103.000	100.400	95.400	85.100	98.100	103.000
Transmitting ERP (watts)	15.787	0.974	0.495	1.442	11.730	84.942	168.331	87.120

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
37	42-41-29.8 N	071-47-30.8 W	233.8	47.9	

Address: 1140 Greenville Rd

City: ASHBY County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	138.200	163.500	145.000	68.800	30.000	30.000	30.000
Transmitting ERP (watts)	301.383	343.844	123.915	17.212	1.267	0.862	4.339	57.968
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	138.200	163.500	145.000	68.800	30.000	30.000	30.000
Transmitting ERP (watts)	0.559	6.546	72.077	254.800	226.824	50.359	4.678	0.979
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	138.200	163.500	145.000	68.800	30.000	30.000	30.000
Transmitting ERP (watts)	35.557	2.084	1.375	2.194	29.159	209.483	410.600	215.057

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
38	42-38-54.9 N	071-47-40.6 W	240.8	47.2	

Address: 601-603 FITCHBURG STATE ROAD

City: ASHBY County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	31.100	159.800	170.800	147.700	56.300	30.000	30.000	30.000
Transmitting ERP (watts)	204.865	233.420	85.530	11.768	0.897	0.575	2.961	39.554
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	31.100	159.800	170.800	147.700	56.300	30.000	30.000	30.000
Transmitting ERP (watts)	0.570	6.676	74.271	261.076	238.587	50.169	4.787	1.001
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	31.100	159.800	170.800	147.700	56.300	30.000	30.000	30.000
Transmitting ERP (watts)	24.123	1.410	0.948	1.499	20.272	140.599	280.157	146.756

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKA226

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
40	43-05-58.2 N	070-47-28.6 W	7.6	67.4	

Address: 165 GOSLING RD

City: NEWINGTON County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	34.000	45.500	68.500	72.400	58.800	51.900	57.200	52.000
Transmitting ERP (watts)	205.727	278.300	62.928	5.059	0.711	0.597	1.577	25.136
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	34.000	45.500	68.500	72.400	58.800	51.900	57.200	52.000
Transmitting ERP (watts)	0.559	3.335	47.419	236.351	181.187	26.867	1.510	0.563
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	34.000	45.500	68.500	72.400	58.800	51.900	57.200	52.000
Transmitting ERP (watts)	10.525	0.618	0.497	0.555	7.391	82.592	243.998	90.540

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
41	43-04-39.1 N	071-07-30.3 W	107.0	60.7	1231475

Address: 150 Raymond Road

City: Nottingham County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.900	95.800	122.100	119.300	102.200	66.300	44.100	30.000
Transmitting ERP (watts)	160.334	230.049	54.265	4.271	0.586	0.522	1.415	21.993
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.900	95.800	122.100	119.300	102.200	66.300	44.100	30.000
Transmitting ERP (watts)	0.493	3.289	48.427	238.724	177.920	27.618	1.619	0.581
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.900	95.800	122.100	119.300	102.200	66.300	44.100	30.000
Transmitting ERP (watts)	10.353	0.693	0.601	0.662	8.753	100.864	305.315	110.743

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKA226

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
42	43-13-24.3 N	071-14-23.2 W	189.0	38.7	

Address: 50 OLD CANTERBURY RD

City: NORTHWOOD County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	43.800	80.800	68.900	30.000	53.500	30.000
Transmitting ERP (watts)	114.248	162.456	37.049	2.808	0.392	0.366	0.961	16.015
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	43.800	80.800	68.900	30.000	53.500	30.000
Transmitting ERP (watts)	0.544	3.573	49.915	233.638	184.420	30.453	1.413	0.618
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	43.800	80.800	68.900	30.000	53.500	30.000
Transmitting ERP (watts)	8.132	0.494	0.387	0.467	6.390	72.302	182.164	77.916

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
43	42-59-40.7 N	070-46-58.5 W	12.5	59.4	

Address: 96 GROVE RD

City: RYE County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	49.700	62.100	64.000	64.300	63.700	45.100	38.900	54.200
Transmitting ERP (watts)	146.515	206.846	49.164	3.766	0.505	0.452	1.193	17.877
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	49.700	62.100	64.000	64.300	63.700	45.100	38.900	54.200
Transmitting ERP (watts)	0.464	2.913	42.460	206.462	152.606	24.148	1.373	0.460
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	49.700	62.100	64.000	64.300	63.700	45.100	38.900	54.200
Transmitting ERP (watts)	10.168	0.644	0.536	0.576	7.457	86.483	257.603	87.494

Control Points:

Control Pt. No. 2

Address: 100 LOWDER BROOK DR

City: WESTWOOD County: NORFOLK State: MA Telephone Number: (617)462-7094

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKA226

File Number:

Print Date:

Waivers/Conditions:

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: AT&T MOBILITY SPECTRUM LLC

ATTN: REGINALD YOUNGBLOOD
AT&T MOBILITY SPECTRUM LLC
3300 E. RENNER ROAD, B3132
RICHARDSON, TX 75082

Call Sign KNLB200	File Number
Radio Service WS - Wireless Communications Service	

FCC Registration Number (FRN): 0014980726

Grant Date 09-27-2010	Effective Date 02-12-2014	Expiration Date 07-21-2017	Print Date
Market Number MEA001	Channel Block B	Sub-Market Designator 0	
Market Name Boston			
1st Build-out Date 03-13-2017	2nd Build-out Date 09-13-2019	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/Mexico), future coordination of any base station transmitters shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: AT&T MOBILITY SPECTRUM LLC

Call Sign: KNLB200

File Number:

Print Date:

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

Spectrum Lease associated with this license. See Spectrum Leasing Arrangement Letter dated 04/01/2005 and File No. 0001999501.

License renewal is granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Pursuant to WCS Order on Reconsideration, FCC 12-130, in order to obtain a renewal expectancy at the 7/21/17 renewal deadline, a licensee must, for each license area, certify that it has maintained, or exceeded, the level of coverage demonstrated for that license area at the 3/13/2017 construction deadline.

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: AT&T MOBILITY SPECTRUM LLC

ATTN: REGINALD YOUNGBLOOD
AT&T MOBILITY SPECTRUM LLC
3300 E. RENNER ROAD, B3132
RICHARDSON, TX 75082

Call Sign KNLB210	File Number
Radio Service WS - Wireless Communications Service	

FCC Registration Number (FRN): 0014980726

Grant Date 09-27-2010	Effective Date 02-12-2014	Expiration Date 07-21-2017	Print Date
Market Number MEA001	Channel Block A	Sub-Market Designator 0	
Market Name Boston			
1st Build-out Date 03-13-2017	2nd Build-out Date 09-13-2019	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/Mexico), future coordination of any base station transmitters shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: AT&T MOBILITY SPECTRUM LLC

Call Sign: KNLB210

File Number:

Print Date:

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

License renewal is granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Pursuant to WCS Order on Reconsideration, FCC 12-130, in order to obtain a renewal expectancy at the 7/21/17 renewal deadline, a licensee must, for each license area, certify that it has maintained, or exceeded, the level of coverage demonstrated for that license area at the 3/13/2017 construction deadline.

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: AT&T MOBILITY SPECTRUM LLC

ATTN: REGINALD YOUNGBLOOD
AT&T MOBILITY SPECTRUM LLC
3300 E. RENNER ROAD, B3132
RICHARDSON, TX 75082

Table with Call Sign (KNLB297), File Number, and Radio Service (WS - Wireless Communications Service).

FCC Registration Number (FRN): 0014980726

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

License renewal is granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Pursuant to WCS Order on Reconsideration, FCC 12-130, in order to obtain a renewal expectancy at the 7/21/17 renewal deadline, a licensee must, for each license area, certify that it has maintained, or exceeded, the level of coverage demonstrated for that license area at the 3/13/2017 construction deadline.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS).

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: REGINALD YOUNGBLOOD
NEW CINGULAR WIRELESS PCS, LLC
2200 N. GREENVILLE AVE, 1W
RICHARDSON, TX 75082

Call Sign KNLF216	File Number
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date 07-07-2005	Effective Date 11-24-2012	Expiration Date 06-23-2015	Print Date
Market Number MTA008	Channel Block A	Sub-Market Designator 17	
Market Name Boston-Providence			
1st Build-out Date 06-23-2000	2nd Build-out Date 06-23-2005	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This license is conditioned upon compliance with the provisions of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, FCC 04-255 (rel. Oct. 26, 2004).

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: REGINALD YOUNGBLOOD
NEW CINGULAR WIRELESS PCS, LLC
2200 N. GREENVILLE AVE, 1W
RICHARDSON, TX 75082

Call Sign WPOI214	File Number
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date 07-07-2005	Effective Date 11-24-2012	Expiration Date 06-23-2015	Print Date
Market Number MTA008	Channel Block A	Sub-Market Designator 7	
Market Name Boston-Providence			
1st Build-out Date 06-23-2000	2nd Build-out Date 06-23-2005	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WPOI214

File Number:

Print Date:

This license is conditioned upon compliance with the provisions of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, FCC 04-255 (rel. Oct. 26, 2004).

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: AT&T MOBILITY II LLC

ATTN: REGINALD YOUNGBLOOD
AT&T MOBILITY II LLC
3300 E. RENNER ROAD, B3132
RICHARDSON, TX 75082

Table with Call Sign (WPWU950), File Number, and Radio Service (WZ - 700 MHz Lower Band (Blocks C, D)).

FCC Registration Number (FRN): 0016982233

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

Operation of the facilities authorized herein, are subject to the condition that harmful interference may not be caused to, but must be accepted from UHF TV transmitters in Canada and Mexico as identified in existing and any future agreements with those countries.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: AT&T MOBILITY II LLC

Call Sign: WPWU950

File Number:

Print Date:

This license is subject to compliance with the conditions set forth in the Commission's Order of Modification, WT Docket No. 12-69, DA 14-43, released January 16, 2014.

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: REGINALD YOUNGBLOOD
NEW CINGULAR WIRELESS PCS, LLC
3300 E. RENNER ROAD, B3132
RICHARDSON, TX 75082

Table with Call Sign (WPZY689), File Number, and Radio Service (CW - PCS Broadband).

FCC Registration Number (FRN): 0003291192

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.711 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WPZY689

File Number:

Print Date:

Pursuant to Order DA 03-617 (rel. March 3, 2003), the designated entity holding period for this license is extended by 703 days, or until the licensee meets its five-year construction requirement, whichever is sooner.

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: AT&T MOBILITY SPECTRUM LLC

ATTN: REGINALD YOUNGBLOOD
AT&T MOBILITY SPECTRUM LLC
2200 N. GREENVILLE AVE, 1W
RICHARDSON, TX 75082

Table with Call Sign (WQGA763), File Number, and Radio Service (AW - AWS, 1710-1755/2110-2155 MHz bands).

FCC Registration Number (FRN): 0014980726

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations.

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS).

Licensee Name: AT&T MOBILITY SPECTRUM LLC

Call Sign: WQGA763

File Number:

Print Date:

AWS operations must not cause harmful interference across the Canadian or Mexican Border. The authority granted herein is subject to future international agreements with Canada or Mexico, as applicable.

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

PROJECT INFORMATION

SCOPE OF WORK: TELECOMMUNICATIONS FACILITY UPGRADE (LTE BWE 2017 UPGRADE):

SITE ADDRESS: 141 PORTLAND STREET
CAMBRIDGE, MA 02139

LATITUDE: 42.356896° N, 42° 21' 57.22" N

LONGITUDE: 71.092401° W, 71° 05' 32.64" W

TYPE OF SITE: ROOFTOP / OUTDOOR EQUIPMENT

TOP OF SCREENWALL: 147'-0"±

RAD CENTER: 145'-0"± (PROPOSED LTE), (UMTS-ALL SECTORS)
133'-0"± (LTE-ALPHA SECTOR)

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: MA2253

**SITE NAME: CAMBRIDGE PORTLAND STREET
(MA0283)**

PROJECT: LTE BWE 2017 UPGRADE

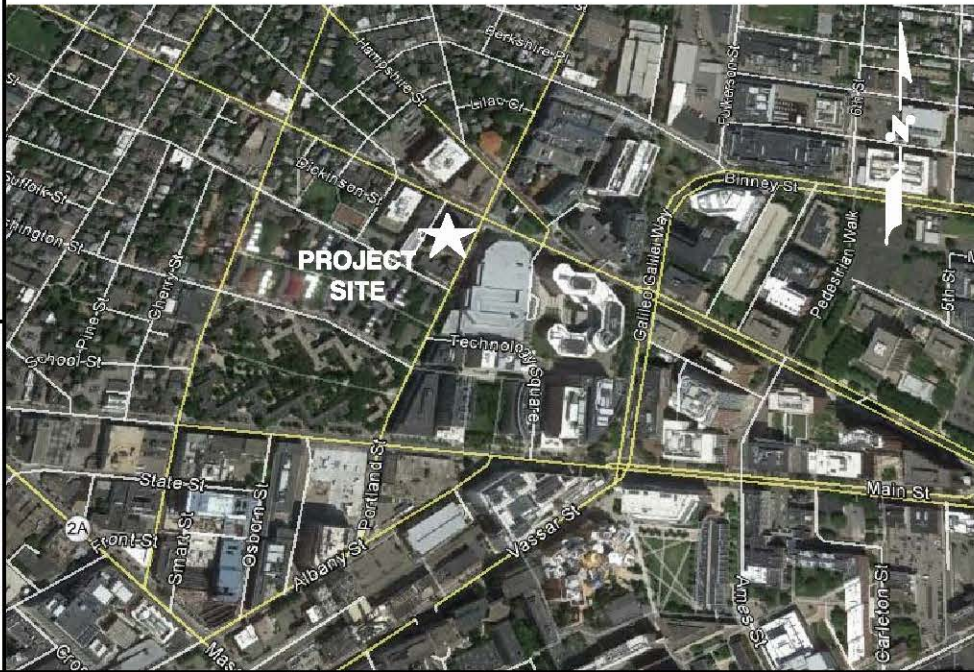
DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	ROOF & EQUIPMENT PLAN	1
A-2	ANTENNA LAYOUTS	1
A-3	ELEVATION	1
A-4	DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1
G-1	GROUNDING DETAILS	1

VICINITY MAP

DIRECTIONS TO SITE:

HEAD NORTHEAST TOWARD LEGGAT McCALL CONN. 0.2 MILES. TURN LEFT AT LEGGAT McCALL CONN. 0.2 MILES. SLIGHT RIGHT AT BURR ST. 489 FT. TURN LEFT AT COCHITUATE RD. 295 FT. MERGE ONTO I-90 E/MASSACHUSETTS TPKE E TOWARD BOSTON/I-95 (PORTIONS TOLL). 14.7 MI TAKE EXIT 18 ON THE LEFT TOWARD CAMBRIDGE/SOMERVILLE. 0.6 MI ROAD NAME CHANGES TO RIVER ST. 0.7 MI. BEAR RIGHT ONTO CENTRAL Q. / WESTERN AVE. 0.1 MI. ROAD NAME CHANGES TO PROSPECT ST. 0.3 MI. TURN RIGHT ONTO BROADWAY. 0.5 MI. TURN RIGHT ONTO PORTLAND ST. 0.1 MI. ARRIVE AT 141 PORTLAND ST ON THE RIGHT.

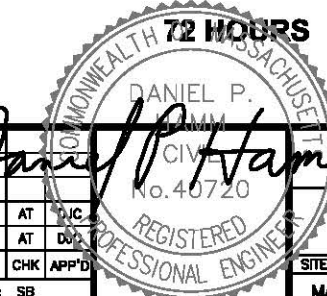


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2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

UNDERGROUND SERVICE ALERT

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NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/06/16	ISSUED FOR CONSTRUCTION	RB	AT	DJC
A	08/11/16	ISSUED FOR REVIEW	SB	AT	DJC

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: SB

AT&T
TITLE SHEET
(LTE BWE)

SITE NUMBER	DRAWING NUMBER	REV
MA2253	T-1	1

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR - SAI
 SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER - AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:
 SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
 BUILDING CODE: IBC 2012 WITH 2016 CT BUILDING CODE AMENDMENTS
 ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
 LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS

 SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

 AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

 AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
 MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

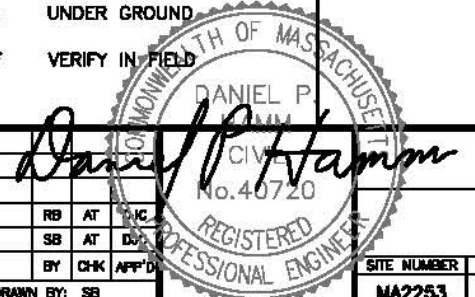
 TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G,
 STRUCTURAL STANDARDS FOR STEEL

 EQUIPMENT AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

 FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		



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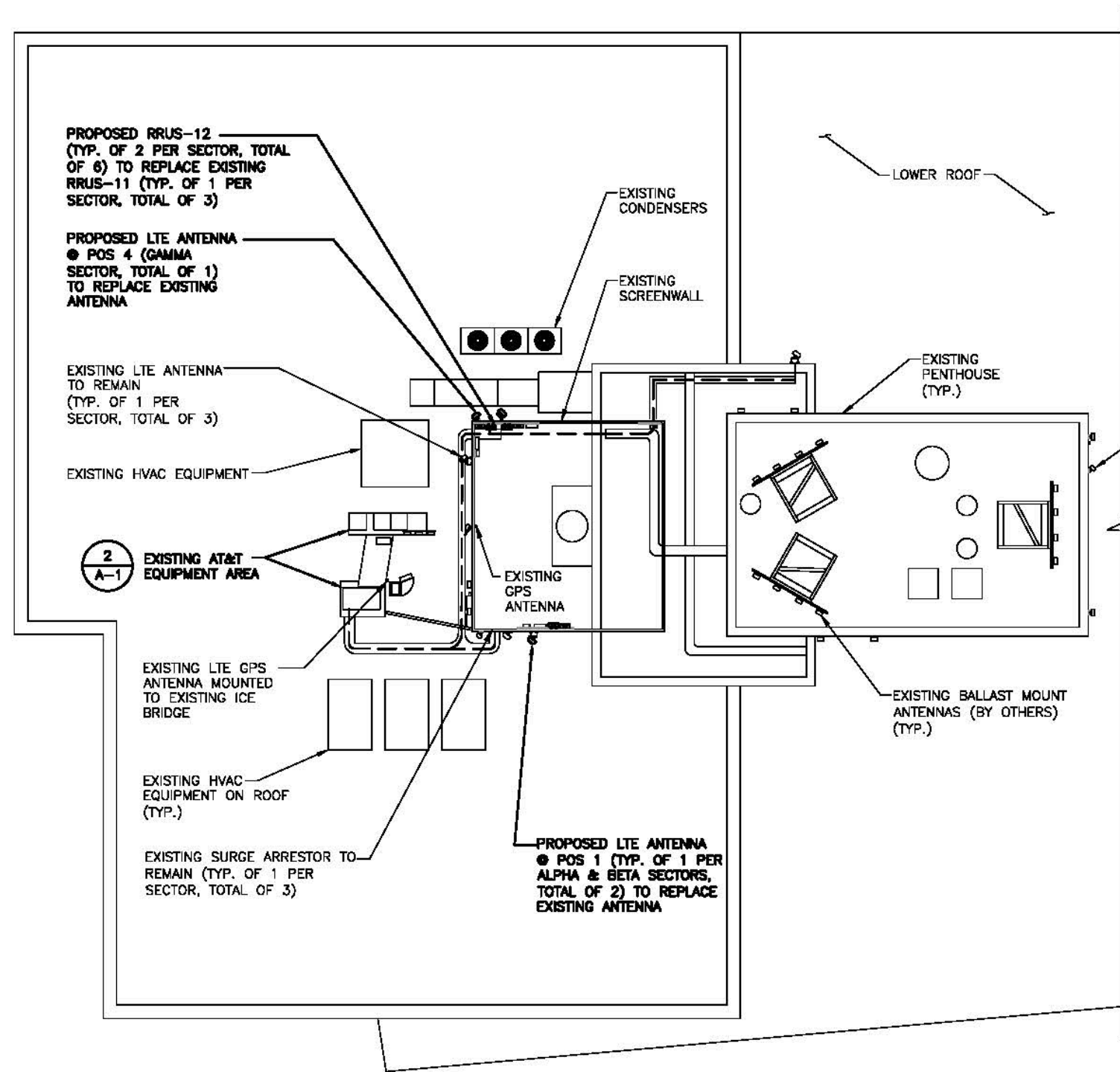
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A	08/11/18	ISSUED FOR REVIEW	SB	AT	DC
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: SB		

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GENERAL NOTES (LTE BWE)		
SITE NUMBER	DRAWING NUMBER	REV
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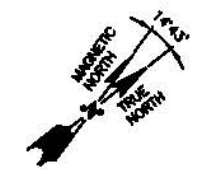
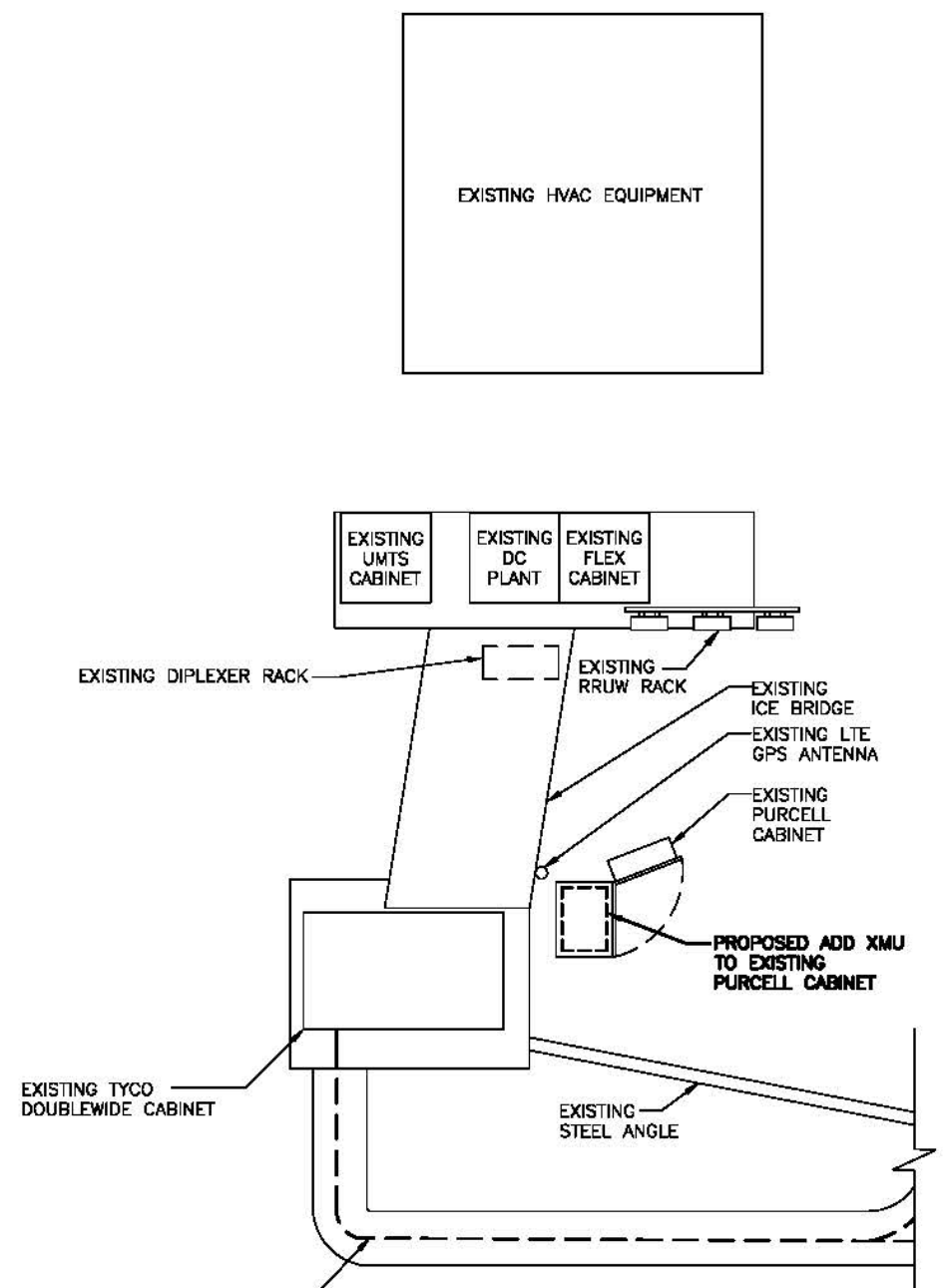
NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: OCTOBER 05, 2016

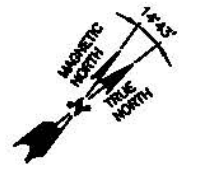
NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



EXISTING UMS ANTENNA TO REMAIN (TYP. OF 1 PER SECTOR, TOTAL OF 3)



ROOF PLAN
22x34 SCALE: 3/32"=1'-0"
11x17 SCALE: 3/64"=1'-0"
1
A-1



EQUIPMENT PLAN
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"
2
A-1

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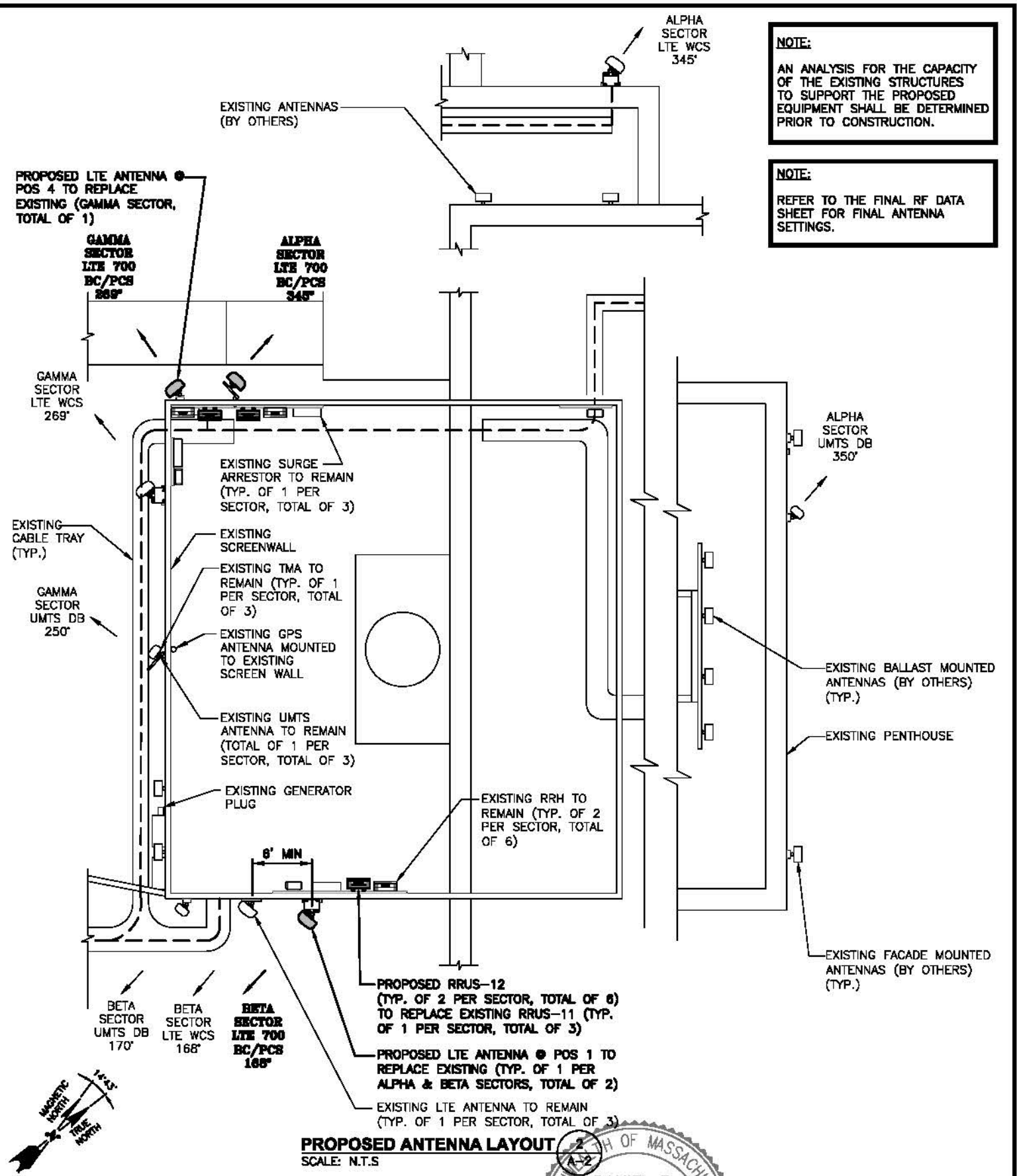
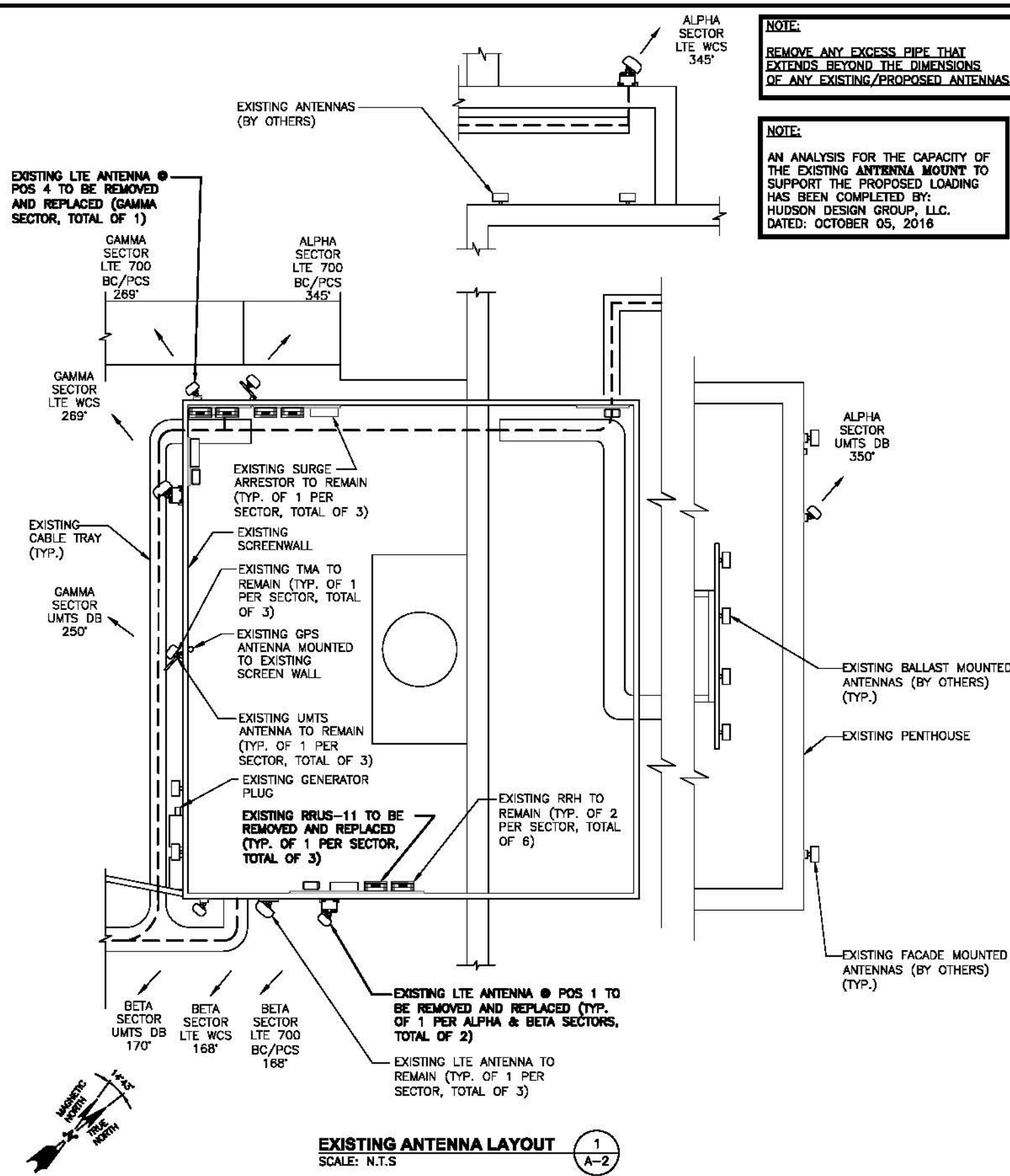
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MIDDLESEX COUNTY

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550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/06/18	ISSUED FOR CONSTRUCTION	RB	AT	DK
A	08/11/18	ISSUED FOR REVIEW	SB	AT	DK



AT&T		
ROOF & EQUIPMENT PLAN (LTE BWE)		
SITE NUMBER	DRAWING NUMBER	REV
MA2253	A-1	1



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SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: SB

DANIEL P. HAMMON
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
No. 40720

AT&T
ANTENNA LAYOUTS (LTE BWE)

SITE NUMBER	DRAWING NUMBER	REV
MA2253	A-2	1

NOTE:
REMOVE ANY EXCESS PIPE THAT EXTENDS BEYOND THE DIMENSIONS OF ANY EXISTING/PROPOSED ANTENNAS.

- TOP OF EXISTING SCREENWALL
ELEV. 147'-0"± (AGL)
- AT&T LTE ANTENNAS
ELEV. 145'-0"± (AGL)
- Q OF EXISTING AT&T LTE ANTENNA (ALPHA SECTOR)
ELEV. 133'-0"± (AGL)
- TOP OF EXISTING ROOF
ELEV. 129'-0"± (AGL)

- EXISTING UMTS ANTENNA TO REMAIN (TOTAL OF 1 PER SECTOR, TOTAL OF 3)
- EXISTING GPS ANTENNA MOUNTED TO SCREENWALL
- EXISTING RRH TO REMAIN (TYP. OF 2 PER SECTOR, TOTAL OF 6)
- EXISTING AT&T EQUIPMENT AREA

- EXISTING LTE ANTENNA TO REMAIN (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- PROPOSED LTE ANTENNA TO REPLACE EXISTING (TYP. OF 1 PER SECTOR, TOTAL OF 3)

- EXISTING LTE ANTENNA (ALPHA SECTOR) (BEYOND)

- EXISTING ANTENNAS (BY OTHERS) (TYP.)
- EXISTING PENTHOUSE (TYP.)
- EXISTING UMTS ANTENNA (ALPHA SECTOR)

PROPOSED RRUS-12 (TYP. OF 2 PER SECTOR, TOTAL OF 6) TO REPLACE EXISTING RRUS-11 (TYP. OF 1 PER SECTOR, TOTAL OF 3)

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

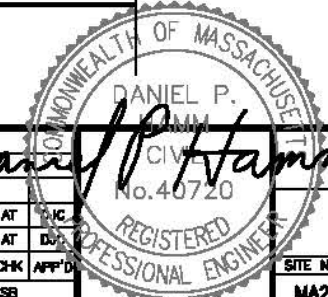
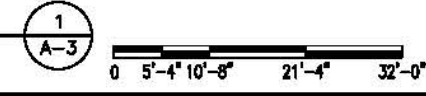
NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
PRIME AND PAINT EXISTING AND PROPOSED MOUNTING BRACKETS AND ANTENNAS TO MATCH EXISTING BUILDING COLOR & TEXTURE.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: OCTOBER 05, 2016

GROUND LEVEL
ELEV. 0'-0"± (AGL)

SOUTH EAST ELEVATION
22x34 SCALE: 3/32"=1'-0"
11x17 SCALE: 3/64"=1'-0"



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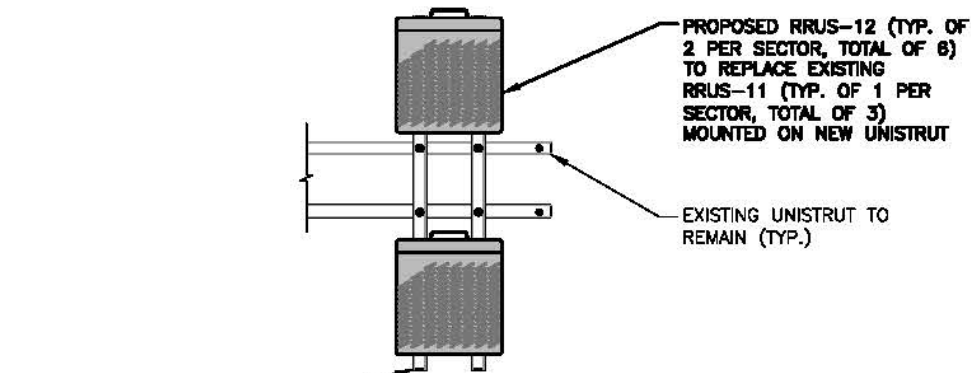
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SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: SB

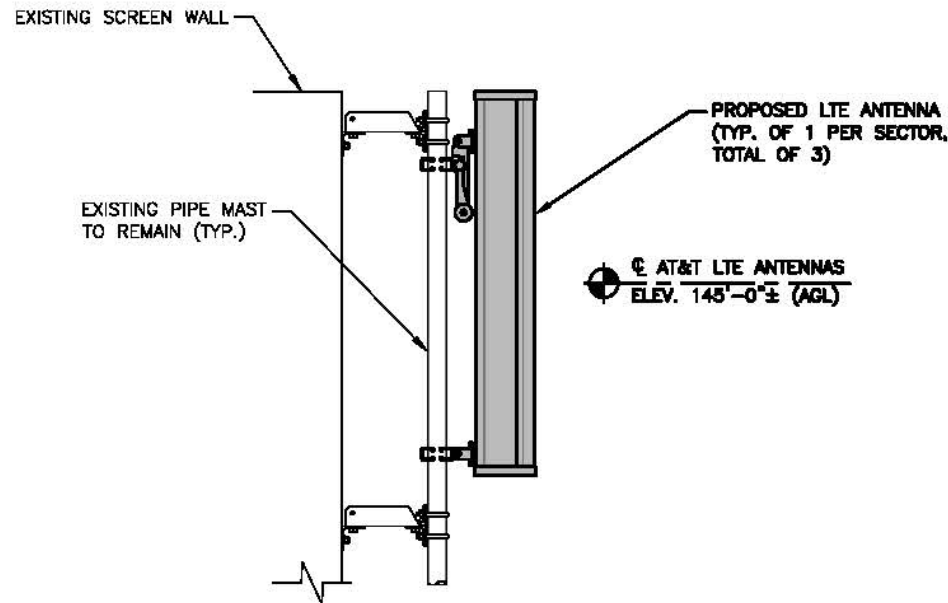
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ELEVATION (LTE BWE)	
SITE NUMBER	DRAWING NUMBER
MA2253	A-3
REV	1



PROPOSED UNISTRUT AS REQUIRED (TYP.)

PROPOSED RRH MOUNTING DETAIL
SCALE: N.T.S

1
A-4



PROPOSED LTE ANTENNA MOUNTING DETAIL
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"



2
A-4

EXISTING ANTENNA SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA	KMW	AM-X-CD-14-65-00T-RET	48.0x11.8x5.9
	-	-	-
	CCI	OPA-65R-LCUU-H4	48.0x14.4x7.3
BETA	KATHREIN	742-264	51.8x10.3x5.5
	KMW	AM-X-CD-14-65-00T-RET	48.0x11.8x5.9
	-	-	-
GAMMA	CCI	OPA-65R-LCUU-H4	48.0x14.4x7.3
	KATHREIN	742-264	51.8x10.3x5.5
	KMW	AM-X-CD-14-65-00T-RET	48.0x11.8x5.9

PROPOSED ANTENNA SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA	CCI	HPA-65R-BUU-H4	48.0x14.8x7.3
	-	-	-
	CCI	OPA-65R-LCUU-H4	48.0x14.4x7.3
BETA	KATHREIN	742-264	51.8x10.3x5.5
	CCI	HPA-65R-BUU-H4	48.0x14.8x7.3
	-	-	-
GAMMA	CCI	OPA-65R-LCUU-H4	48.0x14.4x7.3
	KATHREIN	742-264	51.8x10.3x5.5
	CCI	HPA-65R-BUU-H4	48.0x14.8x7.3

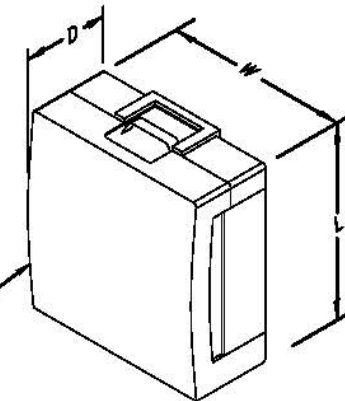
NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
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NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

RRU CHART				
QUANTITY	MODEL	L	W	D
3(E)	RRUS-11	19.7"	17.0"	7.2"
6(P)	RRUS-12	20.4"	18.5"	7.5"
3(E)	RRUS-32	26.7"	12.1"	6.7"
-	RRUS-E2	20.4"	18.5"	7.5"
-	LTE-A2	16.4"	15.2"	3.4"

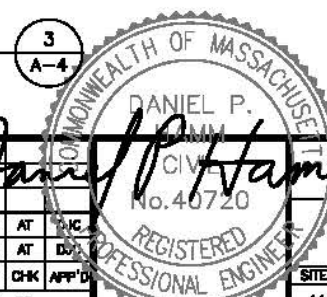
NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS



PROPOSED RRH REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

PROPOSED RRH DETAIL
SCALE: N.T.S

3
A-4



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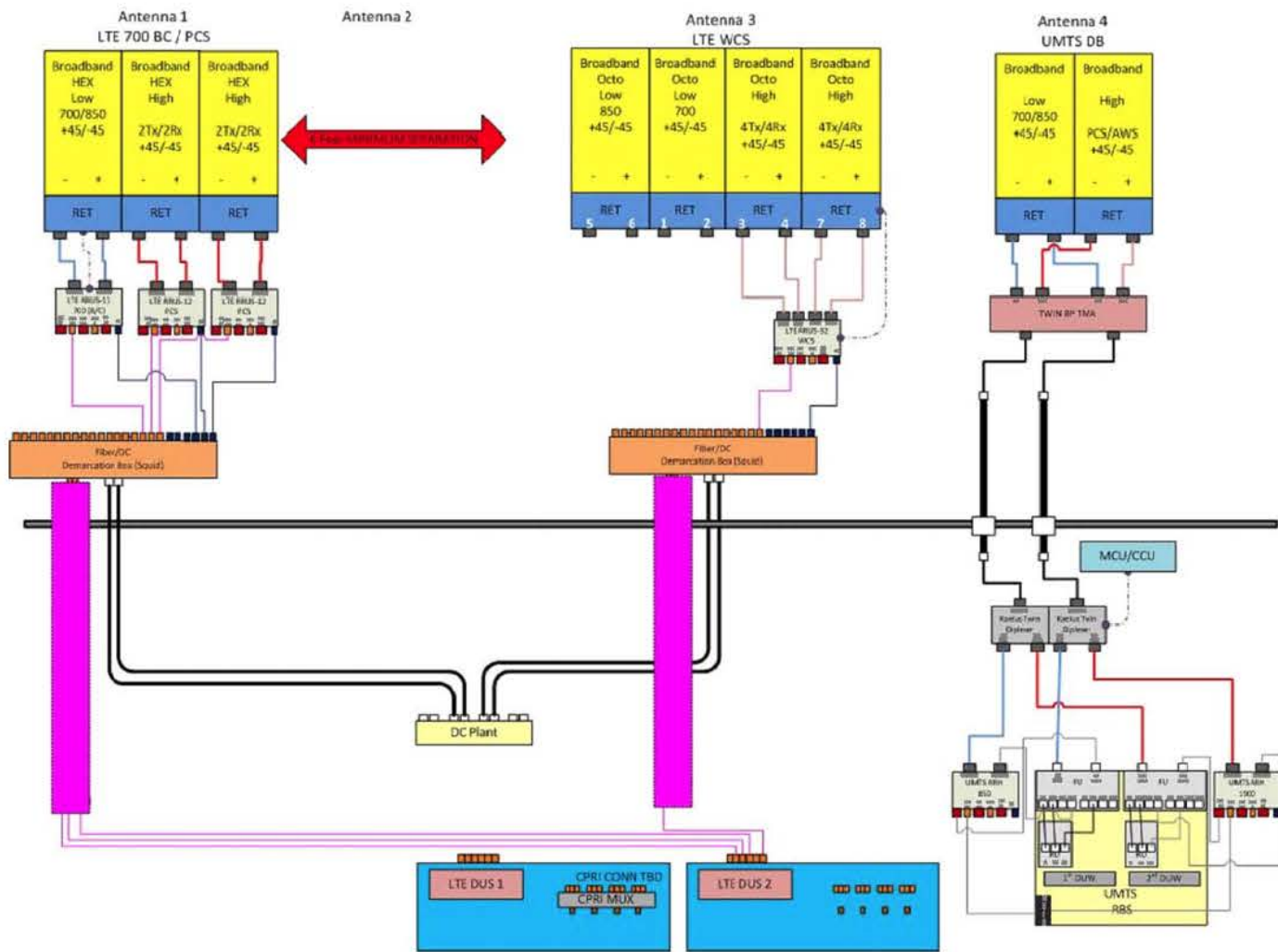
at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/06/18	ISSUED FOR CONSTRUCTION	RB	AT	DK
A	08/11/18	ISSUED FOR REVIEW	SB	AT	DK

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: SB

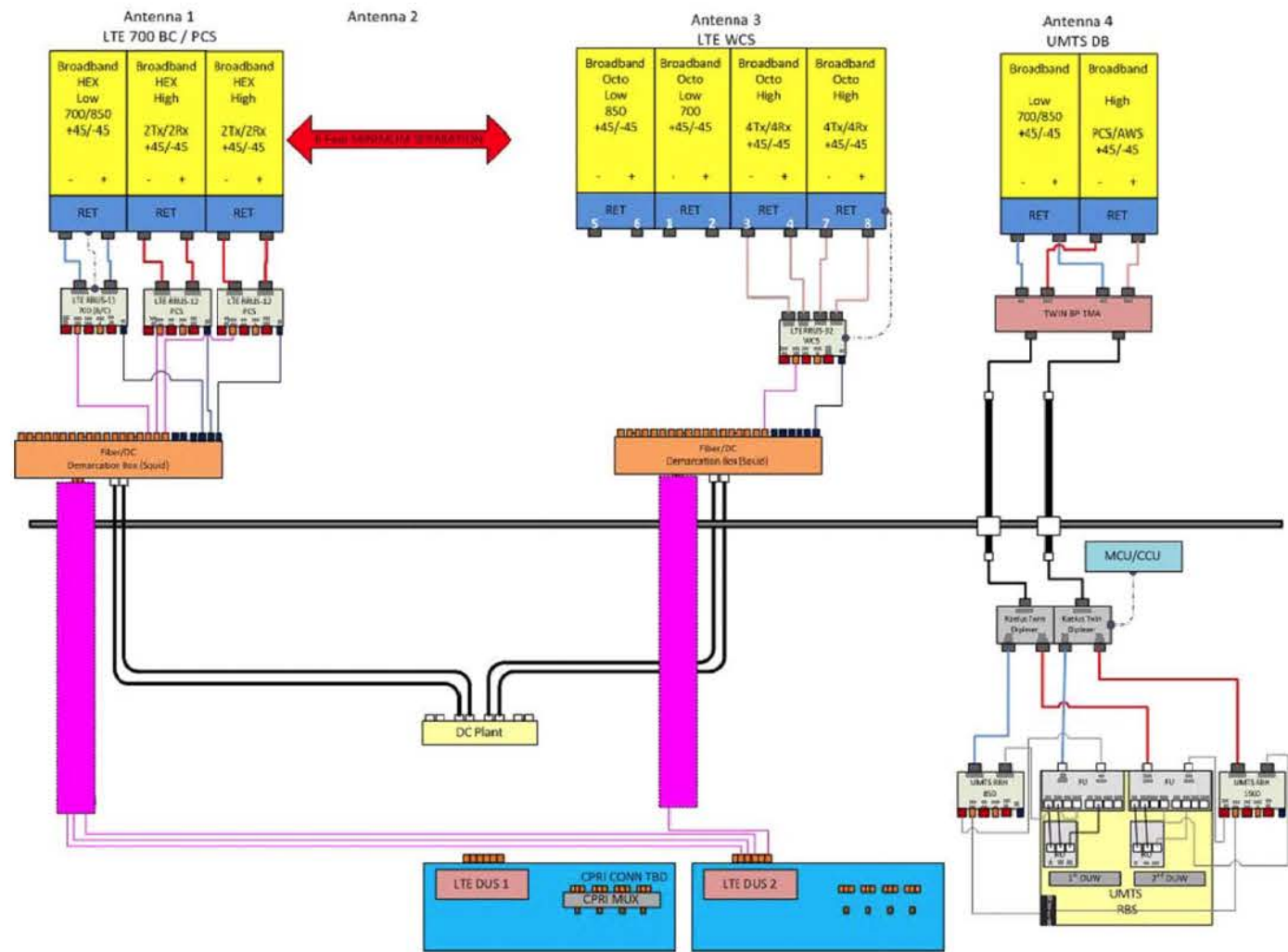
SITE NUMBER	DRAWING NUMBER	REV
MA2253	A-4	1

AT&T
DETAILS
(LTE BWE)



**RF PLUMBING DIAGRAM
(ALPHA & BETA SECTORS)**
SCALE: N.T.S

1
RF-1



**RF PLUMBING DIAGRAM
(GAMMA SECTORS)**
SCALE: N.T.S

2
RF-1

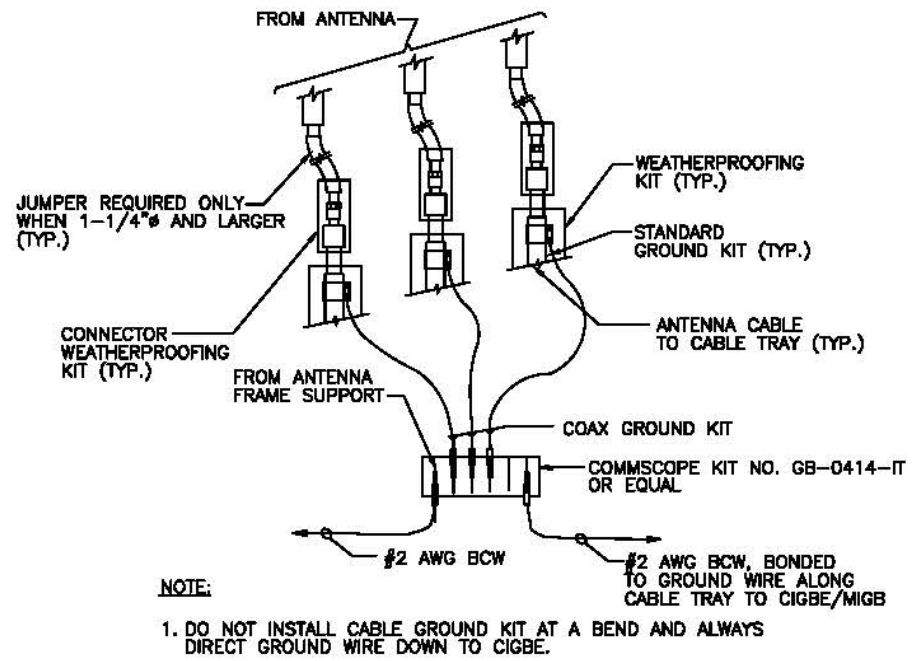
NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

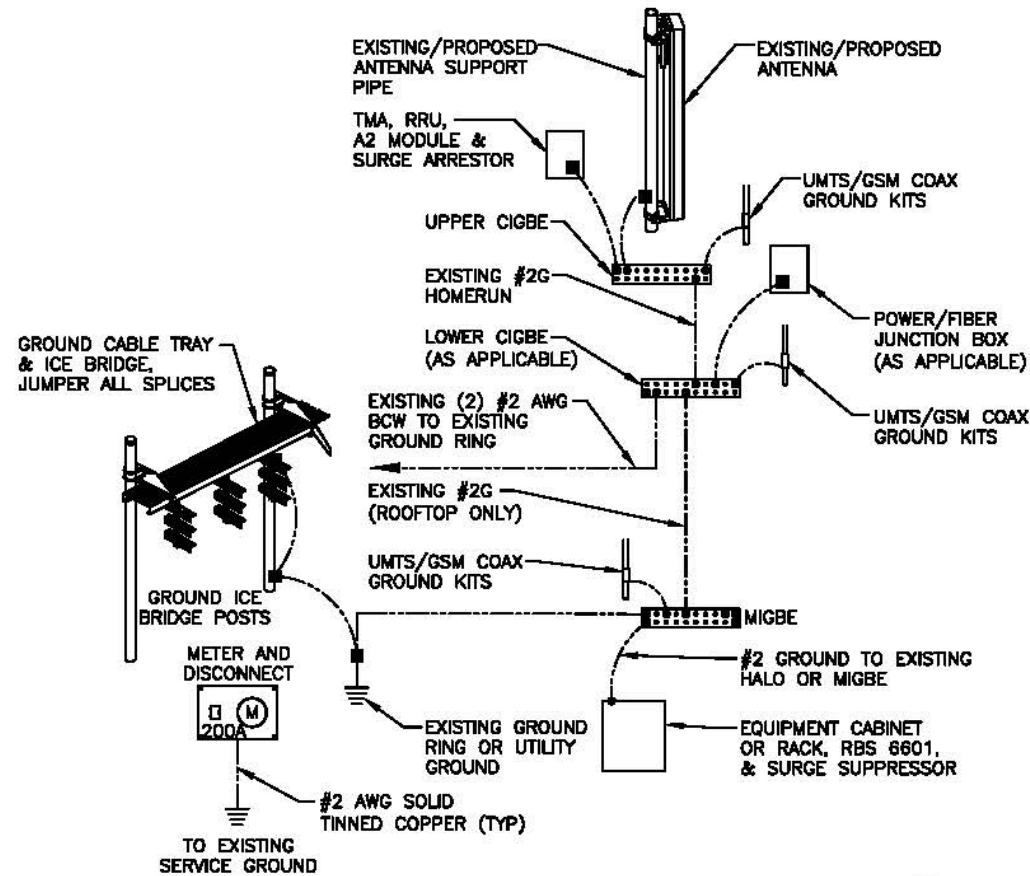
NO.	DATE	REVISIONS	BY	CHK	APP'D
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SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: SB

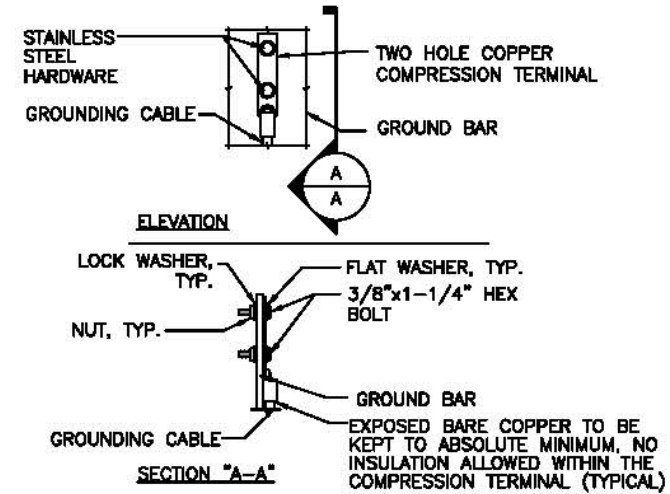
DANIEL P. HAMMON
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
No. 40720



GROUND WIRE TO GROUND BAR CONNECTION DETAIL 1
SCALE: N.T.S. G-1



GROUNDING RISER DIAGRAM 2
SCALE: N.T.S. G-1



TYPICAL GROUND BAR CONNECTION DETAIL 3
SCALE: N.T.S. G-1

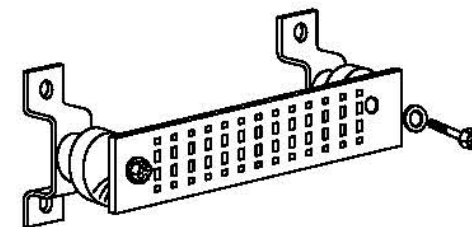
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

- CABLE ENTRY PORTS (HATCH PLATES) (#2)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
- +24V POWER SUPPLY RETURN BAR (#2)
- 48V POWER SUPPLY RETURN BAR (#2)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING (#2)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
- BUILDING STEEL (IF AVAILABLE) (#2)



GROUND BAR - DETAIL 4
SCALE: N.T.S. G-1

65° OctoPORT MULTI-BAND ANTENNA

Model OPA-65R-LCUU-H4



Octoport Multi-Band Antenna Array

The CCI Octoport Multi-Band Antenna Array is an industry first 8-port antenna with full WCS Band Coverage. With four high band ports covering PCS, AWS and WCS bands, two 700 MHz ports, and two 850 MHz ports our octoport antenna is ready for 4X4 high band MIMO.

Modern networks demand high performance, consequently CCI has incorporated several new and innovative design techniques to provide an antenna with excellent side-lobe performance, sharp elevation beams, and high front to back ratio.

Multiple networks can now be connected to a single antenna, reducing tower loading and leasing expense, while decreasing deployment time and installation cost.

Full band capability for 700 MHz , Cellular 850 MHz, PCS 1900 MHz, AWS 1710/2155 MHz and WCS 2300 MHz coverage in a single enclosure.

Benefits

- ◆ RET System allows Independent Tilt of each band specific paired port
- ◆ Reduces tower loading
- ◆ Frees up space for tower mounted Remote Radio Heads
- ◆ Single radome with eight ports
- ◆ All Band design simplifies radio assignments
- ◆ Sharp elevation beam eases network planning

Features

- ◆ High Band Ports include WCS Band
- ◆ Four High Band ports with four Low Band ports in one antenna
- ◆ Sharp elevation beam
- ◆ Excellent elevation side-lobe performance
- ◆ Excellent MIMO performance due to array spacing
- ◆ Excellent PIM Performance
- ◆ A multi-network solution in one radome

Applications

- ◆ 4x4 MIMO on High Band and Dual 2x2 MIMO on 700 & 850 Low Bands
- ◆ Adding additional capacity without adding additional antennas
- ◆ Adding WCS Band without increasing antenna count



65° OctoPORT MULTI-BAND ANTENNA

Model OPA-65R-LCUU-H4

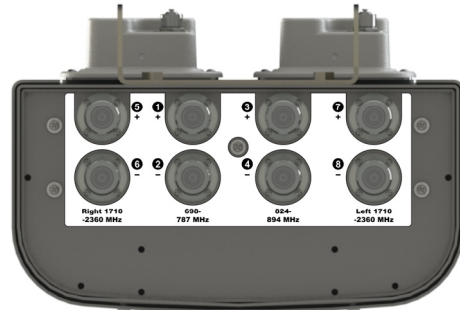
OPA-65R Multi-Band Antenna

Electrical Specifications

Frequency Range	2 X Low Band Ports (L) which cover the range from 698-787	2 X Low Band Ports (C) which cover the range from 824-894	4 X High Band Ports (H1 & H2) which cover the full range from 1710-2360 MHz			
			1850-1990 MHz	1710-1755/2110-2170 MHz	2305-2360 MHz	
Gain	12.7 dBi	13.3 dBi	15.7 dBi	14.9 dBi	16.4 dBi	16.8 dBi
Azimuth Beamwidth (-3dB)	65°	63°	63°	68°	62°	58°
Elevation Beamwidth (-3dB)	18.9°	16.5°	8.9°	9.8°	7.7°	6.9°
Electrical Downtilt	0° to 10°	0° to 10°	0° to 8°	0° to 8°	0° to 8°	0° to 8°
Elevation Sidelobes (1st Upper)	< -20 dB	< -18 dB	< -20 dB	< -20 dB	< -18 dB	< -18 dB
Front-to-Back Ratio @180°	> 28 dB	> 28 dB	> 30 dB	> 30 dB	> 30 dB	> 30 dB
Front-to-Back Ratio over ± 20°	> 28 dB	> 27 dB	> 28 dB	> 28 dB	> 26 dB	> 26 dB
Cross-Polar Discrimination (at Peak)	> 20 dB	> 20 dB	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Cross-Polar Discrimination (at ± 60°)	> 15 dB	> 13 dB	> 17 dB	> 17 dB	> 17 dB	> 17 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 25 dB	> 25 dB	> 25 dB	> 25 dB
VSWR	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1
Passive Intermodulation (2x20W)	≤ -150dBc	≤ -150dBc	≤ -150dBc	≤ -150dBc	≤ -150dBc	≤ -150dBc
Input Power	500 Watts CW	500 Watts CW	300 Watts CW	300 Watts CW	300 Watts CW	300 Watts CW
Polarization	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground

Mechanical Specifications

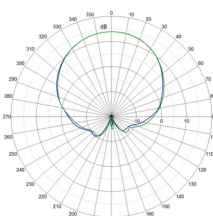
Dimensions (LxWxD)	48.0 x 14.4 x 7.3 inches (1218 x 366 x 185 mm)
Survival Wind Speed	> 150 mph
Front Wind Load	152 lbs (676 N) @ 100 mph (161 kph)
Side Wind Load	86 lbs (381 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	5.9 ft ² (0.60 m ²)
Weight (w/o RET/Mounting)	57 lbs (26 kg)
RET System Weight	7.0 lbs (3.0 kg)
Connector	8; 7-16 DIN female long neck
Mounting Pole	2-5 inches (5-12 cm)



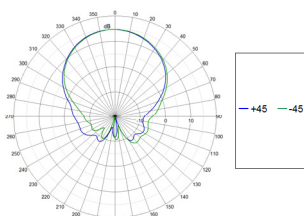
Bottom View

Rear View

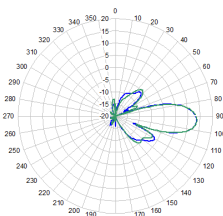
Antenna Patterns*



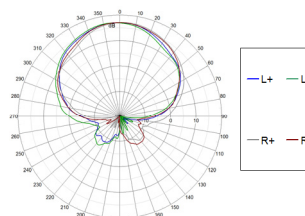
737 MHz Azimuth



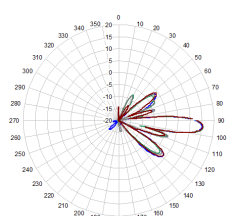
887 MHz Azimuth



Elevation 5°



1920 MHz Azimuth



Elevation 4°

*Typical antenna patterns. For detail information on antenna pattern, please contact us at info@cciprducts.com. All specifications are subject to change without notice.

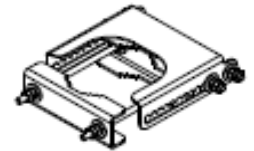
65° OctoPORT MULTI-BAND ANTENNA

Model OPA-65R-LCUU-H4

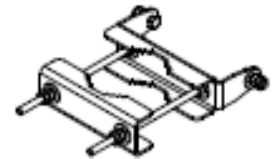
Ordering Information:

OPA-65R-LCUU-H4	4 Foot Octoport Antenna with 65° Azimuth Beamwidth and factory installed RET Actuators (4)
OPA-65R-LCUU-H4-K	Complete Kit with Antenna, Factory Installed Actuators (4) and MBK-02 Mounting Bracket
BSA-RET200	RET Actuator
MBK-02	Mounting Bracket (Top & Bottom) with 0° through 10° Mechanical tilt Adjustment: See Installation Guide 50-000038-01 for Details: Weight 10.3 Lbs. (4.7 kg)

MBK-02 Top Mounting Bracket



MBK-02 Bottom Mounting Bracket



RET [Remote Electrical Tilt] System

General Specification

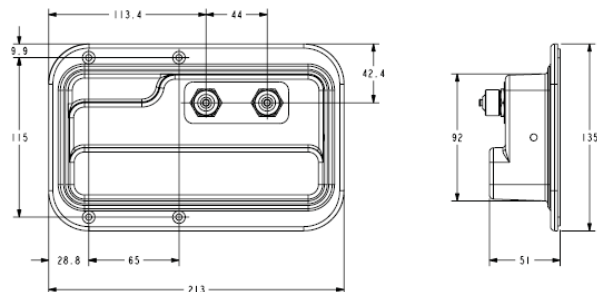
Part Number	BSA-RET200
Protocols	AISG 2.0
RET Type (Reference AISG 1.1)	Type 1
Adjustment Cycles	>10,000 cycles
Tilt Accuracy	±0.1°
Temperature Range	-40°C to +70°C

Electrical Specification

Interface Signal	Data dc
Input Voltage Range	10-30 Vdc
Current consumption during tilting	120mA at Vin = 24V
Current consumption idle	55mA at Vin=24V
Hardware Interface	AISG - RS 485 A/B
Input Connector	1x8-pin Daisy Chain In Male
Output Connector	1x8-pin Daisy Chain Out Female

Mechanical Specification and Dimensions

Housing Material	ASA / ABS / Aluminum
Dimensions (H x W x D)	8 x 5 x 2 inches (213 x 135 x 51 mm)
Weight	1.5 lbs (0.68 kg)



Standards Compliance

Safety	EN 60950-1, UL 60950-1
Emission	EN 55022
Immunity	EN 55024
Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-5, IEC 60068-2-6, IEC 60068-2-11, IEC 60068-2-14, IEC 60068-2-18, IEC 60068-2-27, IEC 60068-2-29, IEC 60068-2-30, IEC 60068-2-52, IEC 60068-2-64, GR-63-CORE 4.3.1, EN60529 IP24

Regulatory Certification

AISG, FCC Part 15 Class B, CE, CSA US



ERICSSON

RRUS 32 B30 DATA SHEET

RRUS 32 B30

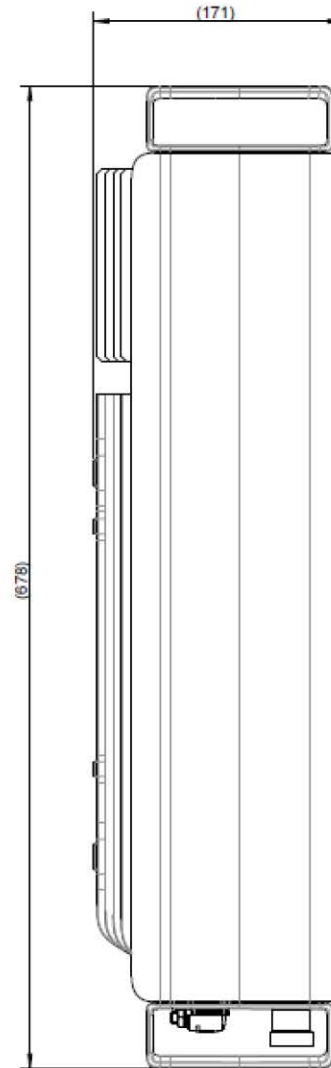
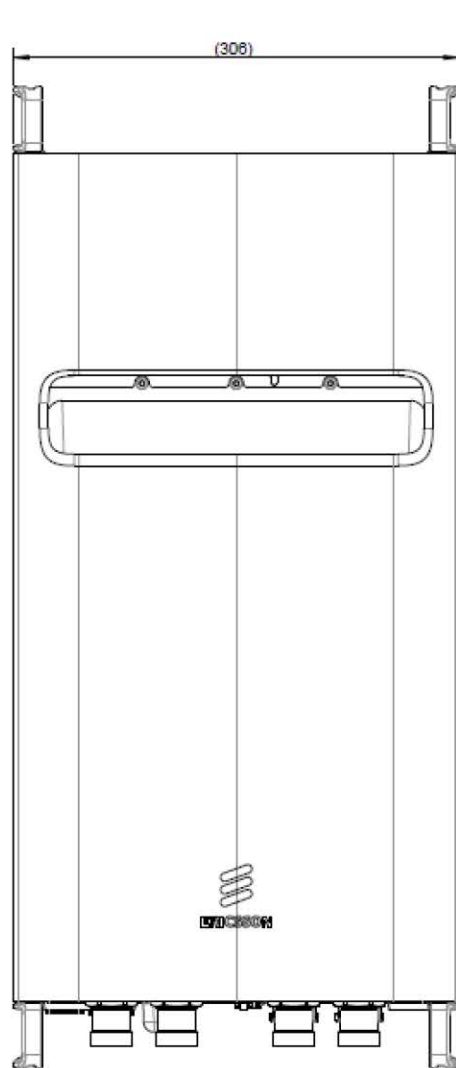
PRELIMINARY



- › WCS A+B blocks
 - TX = 2350 – 2360 MHz
 - RX = 2305 – 2315 MHz
- › CPRI 2 ports x 10 Gbps
- › Dimensions (incl. feet and sunshield)
 - Height: 26.7" (678 mm)
 - Width: 12.1" (306 mm)
 - Depth: 6.7" (171 mm)
- › Weight, excl. mounting hardware
 - 60 lbs (23 kg)

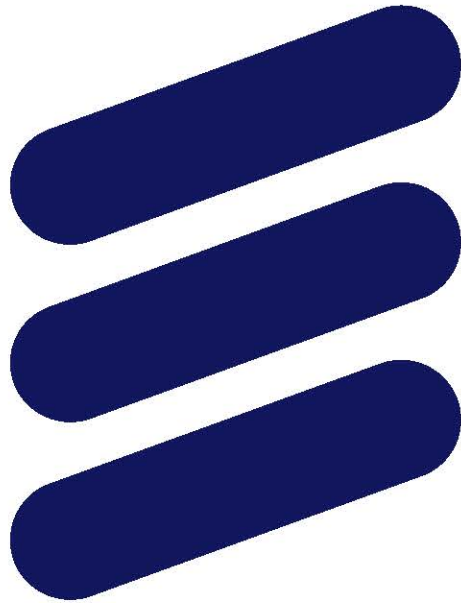


MECHANICAL OUTLINE



(millimeters)

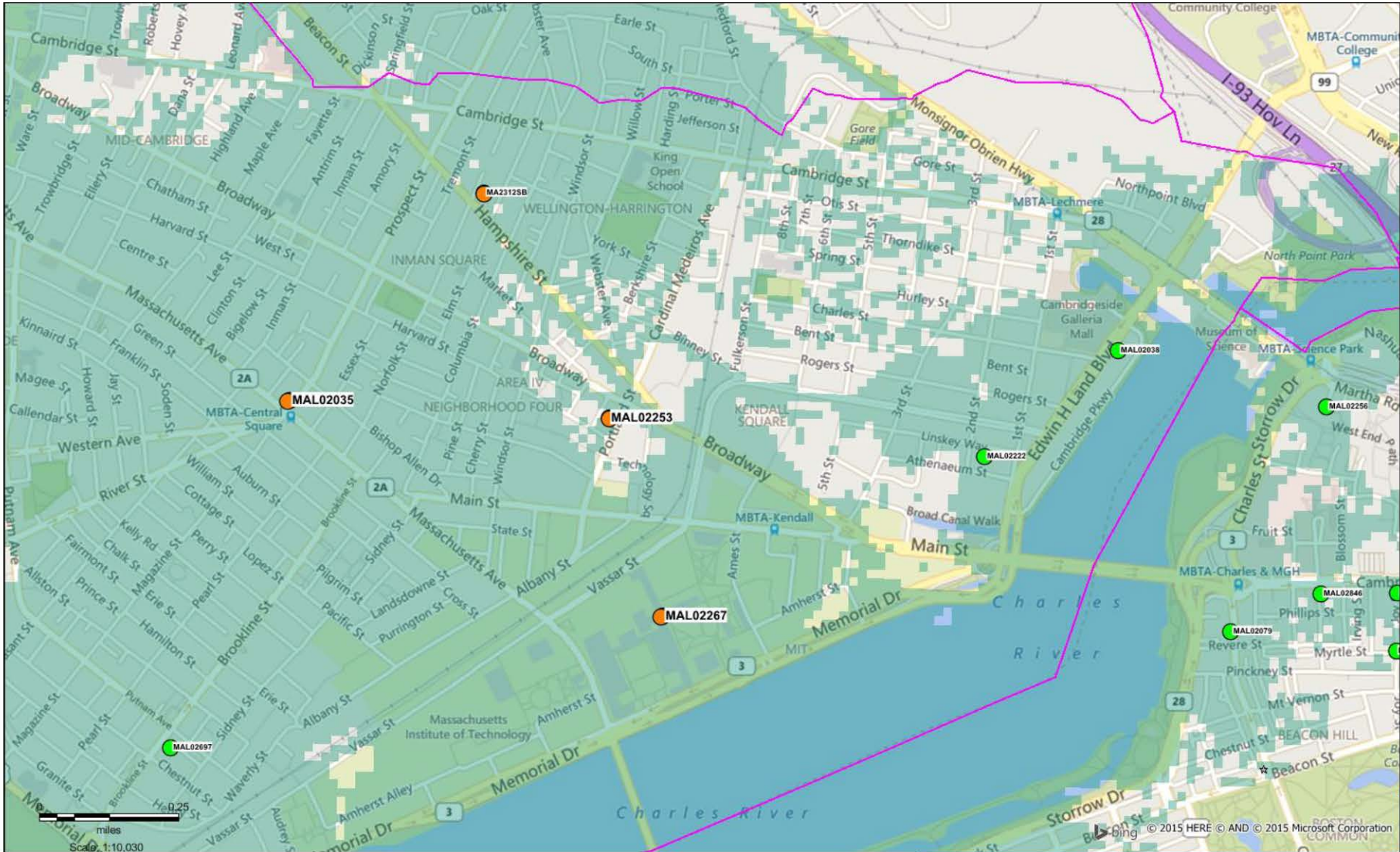
PRELIMINARY



ERICSSON

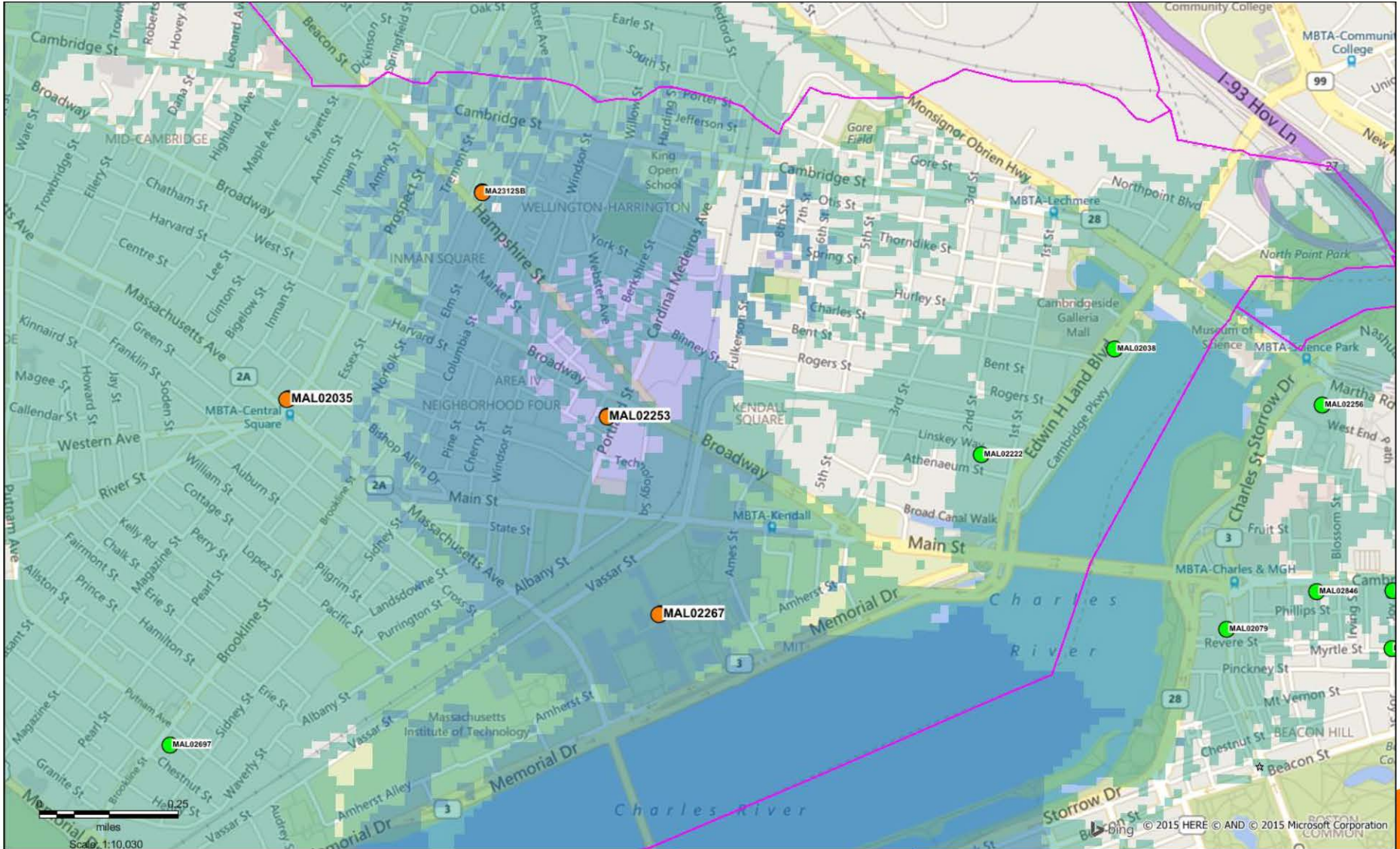
Cambridge Coverage Plot Without MAL02253

- Neighboring site
- Proposed Site
- Future WCS coverage
- Proposed WCS Coverage



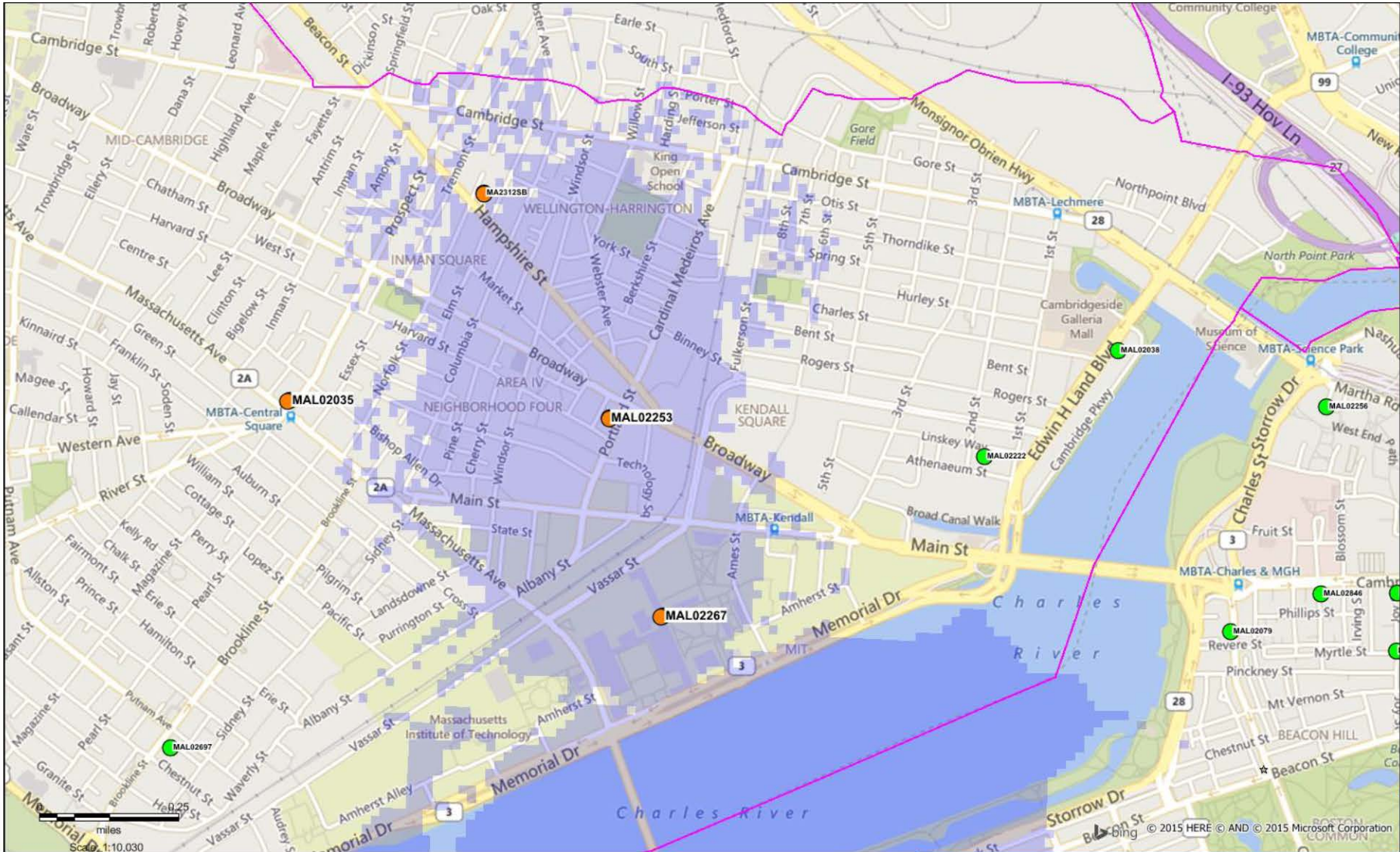
Cambridge Coverage Plot With MAL02253

- Neighboring site
- Proposed Site
- Future WCS coverage
- Proposed WCS Coverage



Cambridge Coverage Plot Individual MAL02253

- Neighboring site
- Proposed Site
- Future WCS coverage
- Proposed WCS Coverage





AT&T Mobility
550 Cochituate Road
Suite 13 &14
Framingham, MA01701

REPORT OF
RADIO FREQUENCY ENGINEER

The undersigned hereby states the following in support of the application by New Cingular Wireless PCS, LLC by and through its manager AT&T Mobility Corporation (“AT&T”) to install panel antennas on the existing building and add fiber cable, DC cable, electronic equipment and other appurtenances as shown of the plans submitted with the application (the “Facility”) located at 141 Portland Street, Cambridge, Massachusetts (the “Site”).

1. I am a Radio Frequency Engineer employed by AT&T, with an office located at 550 Cochituate Road, Framingham, Massachusetts.
2. My primary responsibilities include radio frequency design and planning in the Commonwealth of Massachusetts, including the City of Cambridge and surrounding communities.
3. As enabled under its Federal Communications Commission (“FCC”) License, AT&T seeks to design its wireless network to provide reliable and adequate wireless services to its customers, whether those customers are on the street, in a vehicle, or in a building. Providing reliable and adequate service to its customers in each context is critical for AT&T to provide the quality of wireless service that customers demand, and to meet the objectives of Congress that a robust, competitive and low cost wireless communications capacity be developed to serve the entire nation.
4. AT&T is enhancing its high speed data services network commonly referred to as “long term evolution” (“LTE”). AT&T operates LTE in the 700 and 2100 MHz frequencies under license from the FCC. AT&T will begin to deploy and operate LTE in the 850, 1900 and 2300 MHz band as well
5. AT&T uses its 700 MHz frequency to provide a coverage footprint because the 700 MHz frequency generally covers a greater geographic area than the footprint provided by higher frequencies. Additionally, AT&T uses its other frequencies to add capacity in support of the network as the other frequency bands generally covers a smaller geographic area than that provided by the 700 MHz frequency.
6. LTE is designed as a high speed data services network and is adapting to a high fidelity voice network. LTE service is separate and apart from AT&T’s existing voice and data networks carried by AT&T’s UMTS (3G) service. Additionally, LTE is not integrated into AT&T’s existing network or antenna facilities.
7. AT&T is using its best efforts, to the maximum extent possible, to install the enhanced LTE network utilizing existing AT&T sites and facilities to avoid the need to construct new tower sites and antenna facilities.
8. I have thoroughly reviewed the radio frequency engineering studies, reports and computer models prepared by AT&T with respect to the Facility.
9. In order to build out its LTE network and meet customer demand, AT&T must have in place a system of low power 'cell sites' to serve portable wireless communication handsets and devices. A typical cell site, such as the one proposed, consists of antennas mounted to a building, tower, church or other structure. The antennas are connected to radio operating equipment housed at or near the structure.
10. To maintain effective, reliable and uninterrupted service, there must be a continuous series of cell sites located within close proximity to each other so as to overlap in a system comparable to a honeycomb pattern. If there is no cell site available to accept/receive the signal, network service to the mobile device, data service will terminate involuntarily. Accordingly, the overlap of coverage is necessary for the signal to transfer from one cell site to another cell site seamlessly and without involuntary termination.



AT&T Mobility
550 Cochituate Road
Suite 13 &14
Framingham, MA01701

11. A number of factors determine the distance between cell sites, including, but not limited to, topography, physical obstructions, foliage, antenna height, operating frequency and line-of-sight.
12. Based on the radio frequency studies, reports and computer models prepared in connection with this project, it is my professional assertion that there is inadequate LTE network service available across each licensed band to adequately address the demand of AT&T customers within the City of Cambridge, especially in the surrounding areas and neighborhoods surrounding the Site.
13. Based on the radio frequency studies, reports and computer models prepared in connection with this Facility, it is my further professional opinion that AT&T would be able to achieve the coverage objective by filling these significant gaps in coverage through the installation of the Facility at the Site with dual band antennas which send and receive signals in the 700, 850, 1900, 2100 and 2300 MHz frequencies.
14. The Facility will enhance AT&T's ability to provide adequate coverage in the area and will increase its capacity to better serve the residents and businesses around these areas of Cambridge and to individuals traveling through these areas.
15. The Facility will be in compliance with the FCC Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation.
16. The Facility will be installed, erected, maintained and used in compliance with all applicable Federal, State and local regulations, including, but not limited to: the radio frequency emissions regulations set forth in the federal Telecommunications Act of 1996, and applicable regulations administered by the Federal Aviation Administration and the FCC.
17. Based upon the best radio frequency technology available at this time, it is my professional opinion that the Facility is at the height that is needed to ensure adequate service to area residents and businesses within the geographic area described above.

Executed this 5^h day of November 2016

A handwritten signature in dark ink, appearing to read "K - B", written over a light-colored rectangular background.

KEVIN BREUER,
RF ENGINEER, AT&T



MAXIMUM PERMISSIBLE EXPOSURE STUDY

THEORETICAL REPORT



Site Number: MA2253
Site Name: Cambridge - Portland
Avenue
Latitude: 42.3658961
Longitude: -71.0924011
Address: 141 Portland Street,
Cambridge, MA

Conclusion: *AT&T's existing + proposed antenna installation is calculated to be within the FCC Standard for Uncontrolled/General Public and Controlled/Occupational Maximum Permissible Exposure (MPE).*

Prepared by: **SAI Communications**
260 Cedar Hill Street
Marlborough, MA 01752
(603) 421-0470

Date of Report: November 30, 2015

Table of Contents

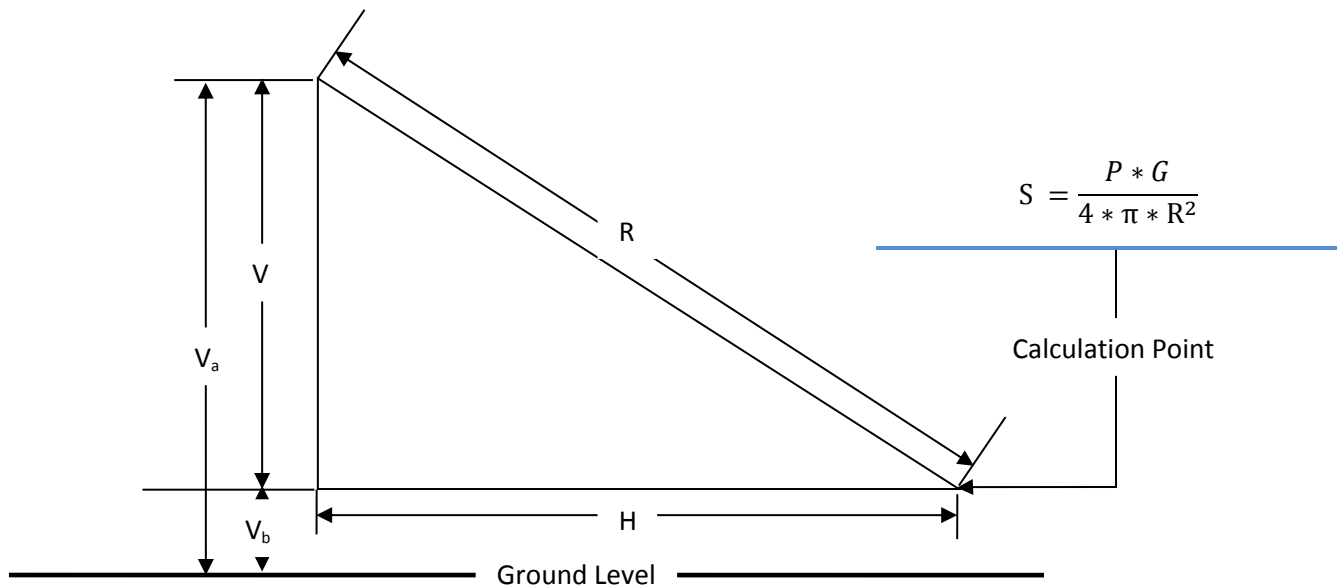
Introduction.....	3
RF Exposure Prediction Method.....	3
Case Summary	4
RF Design Specifications	4
FCC Guidelines	5
FCC RF Exposure Limits	6
Calculation Results (6ft AGL).....	7
Statement of Certification.....	8

Introduction

SAI Communications has conducted this theoretical analysis for AT&T, to ensure that the existing radio facility complies with Federal Communications Commission (FCC) regulations after carrier additions. This report will show that, through the use of FCC suggested prediction methods, the radio facility in question will be in compliance with all appropriate Federal regulations in regards to Radio Frequency (RF) Exposure.

RF Exposure Prediction Method

Power Density is calculated in accordance with FCC OET Bulletin 65 formula (3):



Where:

S = Power Density

P = Power input to the antenna

G = Gain of an antenna

R = Radial distance = $\sqrt{H^2 + V^2}$

H = Horizontal distance from antenna

V = Vertical distance from antenna = $V_a - V_b$

V_a = Antenna height above ground

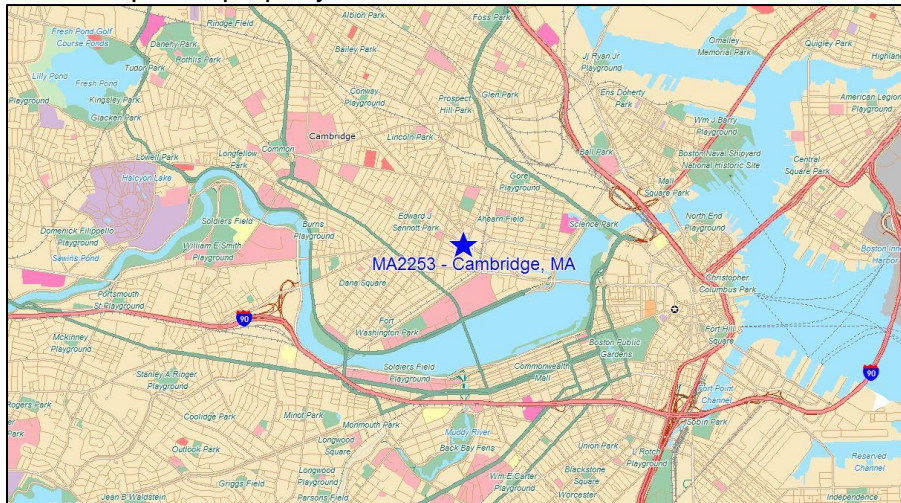
V_b = Calculation height above ground = 6ft

Case Summary

The existing radio facility has radiation centers of 133/143ft located at the following geographic coordinates:

Latitude: 42.3658961
Longitude: -71.0924011

See sketch below for specific property location.



RF Design Specifications

AT&T Mobility is planning to install 3 panel antennas, 1 per sector for LTE Technology with azimuths of 345-168-269 for alpha-beta-gamma sectors. Table below shows the technical data used for the calculation.

	UMTS850	UMTS1900	LTE700BC
Antenna Type:	Kathrein 742-264		KMW AM-X-CD-14-65-00T-RET
Antenna Gain (dBd)	11.85	14.85	9.75
Rad Center, AGL (ft)	133	133	133
ERP (dBm)	56.85	59.85	54.75
No of Radios	2	2	1

	LTE1900	LTEWCS
Antenna Type:	KMW AM-X-CD-14-65-00T-RET	CCI OPA-65R-LCUU-H4
Antenna Gain (dBd)	11.95	14.95
Rad Center, AGL (ft)	133	133
ERP (dBm)	56.95	59.95
No of Radios	1	1

FCC Guidelines

Table 1. MPE Limits for General Population/ Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time for E ² , H ² , or S (Minutes)
0.3 – 1.34	614	1.63	(100)*	30
1.34 -30	824/f	2.19/f	(180/f ²)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	--	--	f/1500	30
1500– 100,000	--	--	1.0	30
f = frequency in MHz		* = Plane wave equivalent power density		

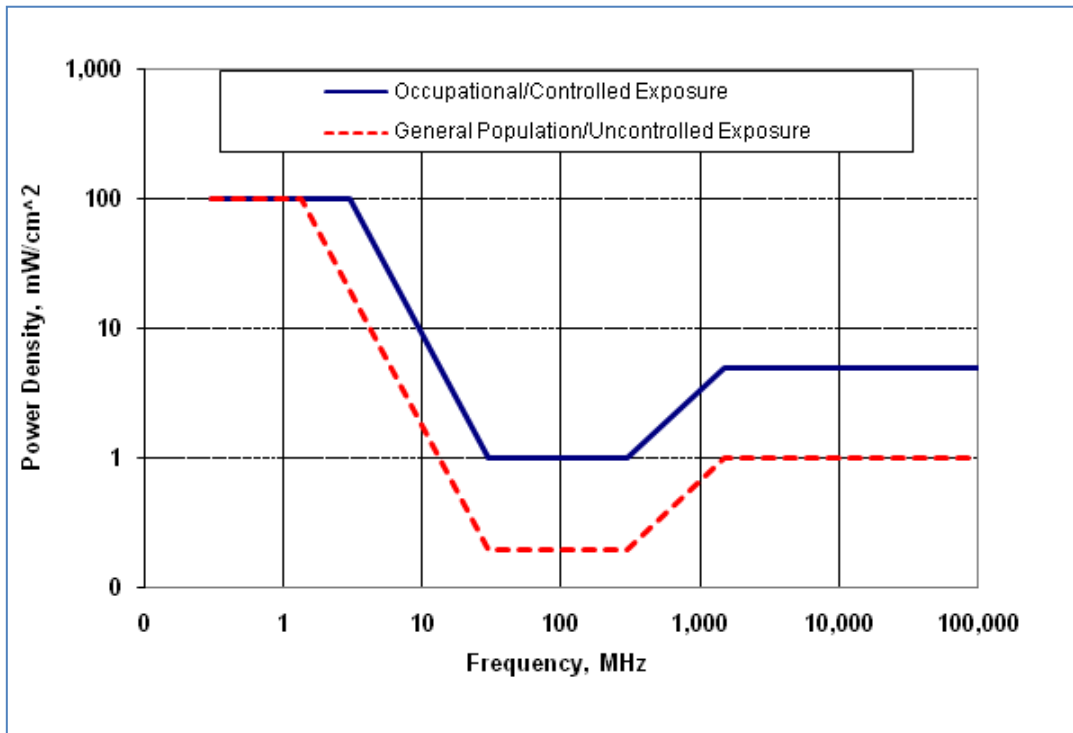
General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can't exercise control over their exposure.

Table 2. MPE Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time for E ² , H ² , or S (Minutes)
0.3 – 3.0	614	1.63	(100)*	6
3.0 – 30	1842/f	4.89/f	(900/f ²)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	--	--	f/300	6
1500– 100,000	--	--	5.0	6
f = frequency in MHz		* = Plane wave equivalent power density		

Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where such occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

FCC RF Exposure Limits

FCC MPE LIMITS (mW/cm ²)		
EXPOSURE ENVIRONMENT	AT&T FREQUENCY BANDS	
	Cellular	PCS
General Public (Uncontrolled)	0.59	1.0
Occupational (Controlled)	2.93	5.0

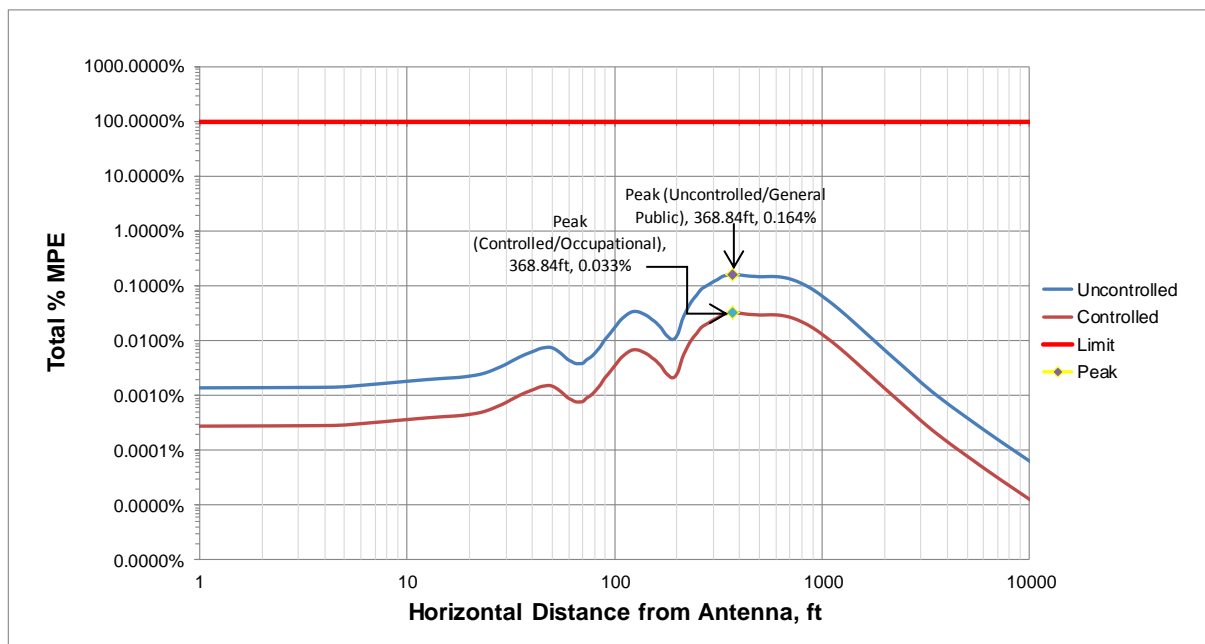
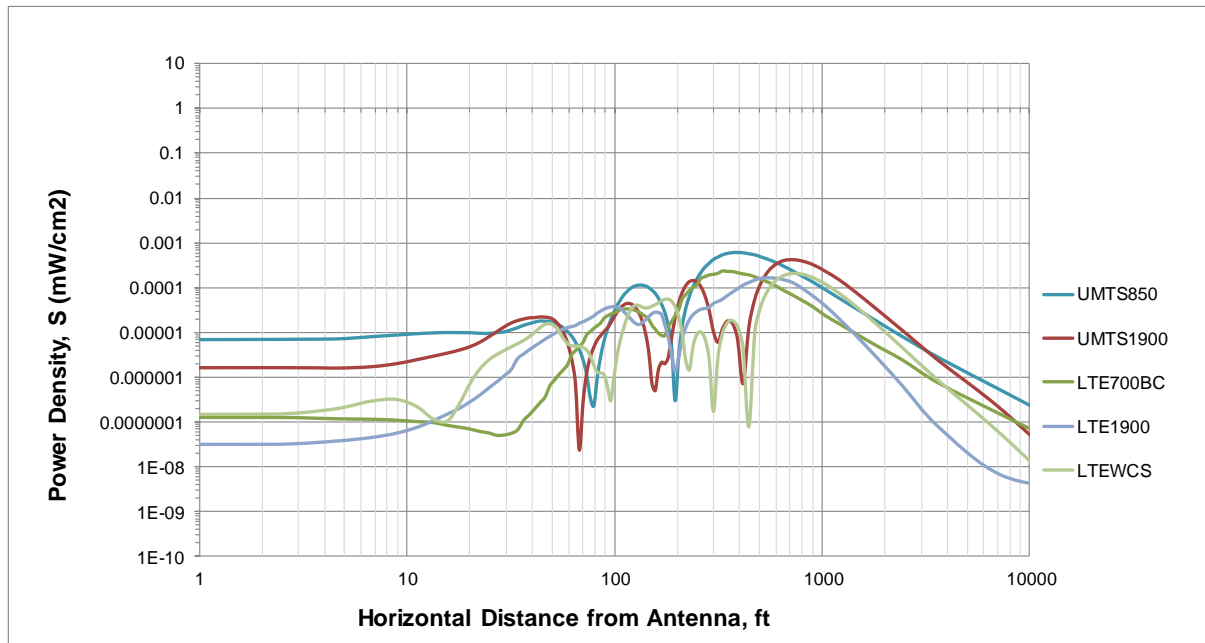


Maximum Permissible Exposures. Occupational/Controlled and General Population/Uncontrolled MPE's are functions of frequency.

Calculation Results (6ft AGL)

The following charts show the graphical representation of the calculated AT&T contribution on power density levels and % MPE at 6ft above ground, as horizontal distance from antenna increases. The calculations take into account the vertical pattern of the antennas and represent the immediate direction of each sector azimuth within the antenna horizontal beamwidth. The calculations also assume line of site to the antennas and the result will be lower if measured indoor due to in-building penetration loss.

Power Density and %MPE



Statement of Certification

I certify to the best of my knowledge that the statements contained in this report are true and accurate. The theoretical computations contained are based on FCC recommended methods, with industry standard assumptions & formulas, and complies with FCC mandated Maximum Permissible RF Exposure requirements.

A comprehensive field survey was not performed prior to the generation of this report. If questions arise regarding the calculations herein, SAI Communications recommends that a comprehensive field survey be performed to resolve any disputes.



Mike Lawton
RF Engineering Manager
SAI Communications

November 30, 2015
Date

BZA APPLICATION FORM - OWNERSHIP INFORMATION

To be completed by OWNER, signed before a notary and returned to The Secretary of the Board of Zoning Appeals.

I/We Kendall Square Entity Inc.
(OWNER)

Address: 1270 Soldiers Field Road

State that I/We own the property located at 141 Portland St, which is the subject of this zoning application.

The record title of this property is in the name of Kendall Square Entity Inc.

*Pursuant to a deed of duly recorded in the date 12/31/85, Middlesex South County Registry of Deeds at Book 16682, Page 565; or Middlesex Registry District of Land Court, Certificate No. _____

Book _____ Page _____

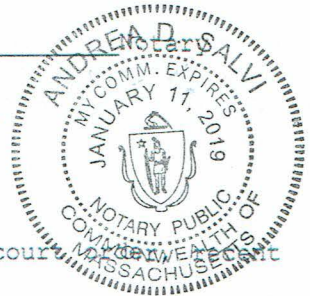
[Signature] AS AGENT
SIGNATURE BY LAND OWNER OR
AUTHORIZED TRUSTEE, OFFICER OR AGENT*

*Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of Suffolk

The above-name Paul Charas personally appeared before me, this 3rd of November, 2015, and made oath that the above statement is true.

[Signature]
My commission expires 11/11/19 (Notary Seal).



- If ownership is not shown in recorded deed, e.g. if by court deed, or inheritance, please include documentation.

UST CORP.

a corporation duly established under the laws of the Commonwealth of Massachusetts
and having its usual place of business at Boston,

Suffolk County, Massachusetts

for consideration paid, and in full consideration of --\$2,613,231.27-----
grants to UST FINANCIAL PLANNING COMPANY, INC., a Massachusetts corporation
of said Boston (40 Court Street, Boston, MA 02108) with quitclaim covenants
~~and~~

12/31/85 04:22 TR 1129 RE 26.00

The land and parcels described on Exhibit A annexed hereto,
consisting of two parcels of unregistered land and one parcel of
registered land.

Locus: 176 Broadway, Cambridge

Vol
26

BOOK 17199-1-295

\$5,958.15

AN OFFICIAL RECORD

MIDDLESEX SOUTH COUNTY 219806 COMMONWEALTH OF MASSACHUSETTS DEEDS & EXCISE DEC31'85 900.00

MIDDLESEX SOUTH COUNTY 219805 COMMONWEALTH OF MASSACHUSETTS DEEDS & EXCISE DEC31'85 900.00

MIDDLESEX SOUTH COUNTY 219804 COMMONWEALTH OF MASSACHUSETTS DEEDS & EXCISE DEC31'85 900.00

MIDDLESEX SOUTH COUNTY 219808 COMMONWEALTH OF MASSACHUSETTS DEEDS & EXCISE DEC31'85 900.00

MIDDLESEX SOUTH COUNTY 219807 COMMONWEALTH OF MASSACHUSETTS DEEDS & EXCISE DEC31'85 900.00

MIDDLESEX SOUTH COUNTY 219809 COMMONWEALTH OF MASSACHUSETTS DEEDS & EXCISE DEC31'85 900.00

MIDDLESEX SOUTH COUNTY 219810 COMMONWEALTH OF MASSACHUSETTS DEEDS & EXCISE DEC31'85 558.15

BK 16682 Pg 566

In witness whereof, the said UST CORP.

has caused its corporate seal to be hereto affixed and these presents to be signed, acknowledged and delivered in its name and behalf by James V. Sidell its President hereto duly authorized, this 17th day of December in the year one thousand nine hundred and eighty-five.

Signed and sealed in presence of

Maurice C. Reggiani

UST CORP.

by

James V. Sidell
James V. Sidell, President

The Commonwealth of Massachusetts

Suffolk,

ss.

Dec. 17

19 85

Then personally appeared the above named James V. Sidell and acknowledged the foregoing instrument to be the free act and deed of the before me,

Paul W. Lester

Notary Public ~~XXXXXXXXXXXX~~

My commission expires

11/28

19 86

CHAPTER 183 SEC. 6 AS AMENDED BY CHAPTER 497 OF 1969

Every deed presented for record shall contain or have endorsed upon it the full name, residence and post office address of the grantee and a recital of the amount of the full consideration thereof in dollars or the nature of the other consideration therefor, if not delivered for a specific monetary sum. The full consideration shall mean the total price for the conveyance without deduction for any liens or encumbrances assumed by the grantee or remaining thereon. All such endorsements and recitals shall be recorded as part of the deed. Failure to comply with this section shall not affect the validity of any deed. No register of deeds shall accept a deed for recording unless it is in compliance with the requirements of this section.

Exhibit "A" to Deed from UST Corp. to
UST Financial Planning Company, Inc.

The following parcels of land with the buildings thereon situated in Cambridge, bounded and described as follows:

PARCEL ONE (Unregistered land)

A certain parcel of land situated on the southeasterly side of Davis Street in said Cambridge and bounded and described as follows:

Being numbered 8-10 on said Davis Street, and shown as Lots 5 and 6 on a plan entitled "Plan of Premises in Cambridgeport belonging to Edward Hixon dated October 25, 1882, W.A. Mason & Son, Surveyors," recorded with Middlesex South District Registry of Deeds in Plan Book 39 as Plan No. 8 and bounded and described as follows:

NORTHWESTERLY by said Davis Street forty tow and 42/100 (42.42) feet;
NORTHEASTERLY by land of owners unknown, fifty three and 97/100 (53.97) feet;
SOUTHEASTERLY by lot 7 on said plan forty one and 49/100 (41.49) feet;
and
SOUTHWESTERLY by the center line of a passageway shown on said plan fifty three and 95/100 (53.95) feet.

Containing 2264 square feet.

Together with and subject to passageway rights as appear of record.

For title reference, see below.

PARCEL TWO (Unregistered land)

Being numbered 6 on said Davis Street and shown as lots 7, 8 and 9 on the plan hereinbefore referred to and bounded and described as follows:

Beginning at a point in the center of the passageway shown on said plan 53.95 feet southerly from Davis Street, thence running

SOUTHEASTERLY 40.08 feet, thence turning and running;
NORTHEASTERLY 18.75 feet, thence turning and running;
SOUTHEASTERLY 17.60 feet, thence turning and running;
NORTHEASTERLY again 18.16 feet, thence turning and running;
NORTHWESTERLY 59.52 feet, thence running and running;
SOUTHWESTERLY by lots 5 and 6 on said plan 41.49 feet to the point of beginning.

For title reference, see below.

PARCEL THREE (Registered land)

NORTHEASTERLY by Broadway, one hundred forty-one and 15/100 feet;
SOUTHEASTERLY by Portland Street, one hundred ninety-eight and 90/100 feet;
SOUTHWESTERLY by land now or formerly of Howard M. Faust, forty-eight and 77/100 feet;
NORTHWESTERLY by land now or formerly of George B. Gilbert et al, six and 74/100 feet;

BK: 16682 PG 568

SOUTHWESTERLY by land now or formerly of said Gilbert et al and land formerly of Predore Stacey, one hundred twelve and 96/100; and

NORTHWESTERLY by Davis Street, one hundred eighty-five and 73/100 feet.

All of said boundaries of Parcel Three are determined by the Land Court to be located as shown on a Plan, as approved by the Court, filed in the Land Registration Office, a copy of said portion of which is filed in the Registry of Deeds for the South Registry District of Middlesex County in Registration Book 28, Page 285, with Certificate 4477. (Plan No. 4190A).

Title Reference for Parcels One and Two: Deed of Trustees of C-B-T Realty Trust dated January 3, 1983, recorded with Middlesex South Registry of Deeds, Book 148846, Page 247.

Title Reference for Parcel Three: Certificate 16682 BK. 964 Page 82

USCAM2.04